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## ALCHEMICAL TEXTS BEARING THE NAME OF PLATO.

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THERE are several alchemical or near-alchemical texts to which Plato's name is attached :

- (a) *Liber quartorum* or *Summa Platonis*. This occurs in manuscripts from the XIV century.
- (b) *Quantum Platonis Scolasticorum* or *Liber Platonis Quartorum cum commento Hebuhabes Hamed filius Gahar explicato ab Hestole*, in four Books, of which Book I is introductory and the remaining Books are Commentary on (a). Manuscripts of this text from the XIV century onward. Printed in Zetzner *Theatrum Chemicum*, vol. V, 1622, pp. 114-208 (and in 2nd edition, 1660, pp. 101-85). (Cf. (c) below.)
- (c) *Sermo* 45 of the famous *Turba Philosophorum* bears the name of Plato, and is similar to part of (a). The earliest Latin manuscripts of the *Turba* are of the XIII century. Part of the original Arabic of the work has been discovered and published with an English translation by H. E. Stapleton in *Memoirs of the Asiatic Society of Bengal*, XII, 1, Calcutta, 1933, p. 128.
- (d) *Liber Platonis super aptationem lapidis pretiosi scribens filio suo ex dictis philosophorum in VII capitulis*. Known only in one manuscript. It is possible that this text (which we have not seen) connects with (c).
- (e) *Sublimacio Argenti Vivi secundem Platonem*. In manuscripts from the XII or XIII century onward. Sometimes anonymous without title. Often as part of an alchemical series. Partly printed by Berthelot in a longer version, as part of the *Liber LXX* of 'Geber' in *Archéologie et Histoire des Sciences in Mémoires de l'Académie des Sciences de l'Institut de France*, Série II, Tom. 49, Partie ii, pp. 360-2.



- (f) *Liber Activarum Institutionum*; or *Liber Anaguenis* or *Neumich*; or *Liber Vacce*; or *Regimentum* or *Tegumentum*; or *Liber Aggregationis*. Manuscripts from the XIII (or perhaps XII) century.
- (g) *Liber Platonis de tredecim clavibus sapientie maioris, translatus de arabico in latinum anno Dom. 1301*. Known in only one manuscript, which is of the XIV century.

a) *Liber Quartorum*.

The title *Liber Quartorum* refers to the Four Elements whose behaviour plays an important part in the work. The MSS. in this country bear the title *Summa Platonis*. The author is an alchemist who had read a version of the *Timæus* of Plato, and he bases his chemical advice on the cosmological conceptions of that work.

The opening sentence sets the tone. 'As all things are of the same kind (genus), their roots must be one, wherefore their diversity must arise from the superfluity of their parts'. Our *Summa* passes from the unity of the whole to a consideration of bodies and their quality, and to the geometric conceptions of the *Timæus*. 'Let it suffice thee' we are told 'that that figure which hath fewer angles is nearer to the simple Form, so that a triangle is nearer to the Simple Form than is a quadrilateral<sup>1</sup> since it hath fewer terminations. The simple body is round and hath no angle'. In other words, the Sphere is the most perfect of all figures. 'Dismiss, then, corruption and use that which is simpler and that is the Kind of all Kinds (genus generum) and the Form of Forms. For it is the first and last among the planets as the sun among the stars. Therefore thou seekest concerning the nature of both luminaries: thou must choose that which is homogeneous and that applieth to the moon'.

There follows a discussion of purposeful obscurity concerning the qualities of 'sun' and 'moon' (gold and silver). A XV century annotation of the Sloane MS. points out that the argument corresponds to that of the well-known *Mirror of Alchimy*. Gradually we pass to the physical qualities of gold and of silver and to the operation with mercury to extract gold and silver from baser matter. The directions become more definite and deal with simple alchemical properties. Thus we have a discussion of the diverse results from heating cloth in water or in oil; in the one case it becomes bleached, in the other destroyed. So with the tincture of soul and of spirit, until we reach the Elixir, which 'when projected on other bodies transformeth the substance thereof to Perfection . . . .'

(b) *Quartum Platonis Scolasticorum*.

This is a composite work in four books, Book I being introductory, and Books II-IV more or less a commentary on (a). Book I is arranged as a Dialogue between Thebed and Hebuhabes Hamed. Thebed proposes to

<sup>1</sup> So the Stowe MS. The Arundel has 'triangle' which is meaningless in the context.



Hebuhabes to find out the 'brother of the book *Estolica* for you, Hebuhabes, to abbreviate as promised', and begs him to abbreviate and explain 'concerning the hidden secret in the book of Senior Plato'.

In the usual style of the alchemical dialogues, Thebed and Hebuhabes pay one another compliments and protest that there is no wickedness in their labours. The phraseology is reminiscent of the *Emerald Table*<sup>2</sup> and of the earlier commentaries. For example, 'things with the four natures or qualities' are considered; the vegetable seed is buried in the earth and turns to harvest, and gold and silver are found. At a certain stage of Book I, Hamed cites Plato and his disciple Hermonides. Then comes a discussion in which the names of Plato and Hermonides as speakers take the place of Thebed and Hebuhabes. Hermonides describes how he went to Babylon and to the Euphrates and 'sought to go to the land of the Greeks'. Apparently without journeying there, he succeeded in finding and speaking with Plato. At the end of the dialogue we are again with Thebed and Hebuhabes or Hamed. The behaviour of 'the Four' is described in terms of the corporeal and the incorporeal, and we are told of the conditions of 'flight' or sublimation in terms closely reminiscent of the Plato. The remaining books of this composite text constitute a long Commentary on the *Summa Platonis* [our text (a)]. Though the text commented begins and ends almost as our (a), it is considerably longer. As in the *Summa*, there is much alchemy, and the commentators show familiarity with a version of the *Timæus*. They cite 'Plato in libro dialogorum' for the properties of the circle. One 'Abrachos, followed by Ptolemy in the *Almagest*', is cited as authority that the arcs composing a circle are in their ultimate minuteness straight lines, but Plato, we are assured, rejected this view of Abrachos and 'I found that Salmos supported Ptolemy. He recalled that Ptolemy intended to contradict Abrachos and he showed that the words of Ptolemy, if truly explained, agree with the Philosopher'. Hamed relates that he 'discovered the book by Ylia, that is the book of Euclid', and quotations from it are correctly given. We learn further that 'Estolmos' said that souls are bound to the body by triangles. This name of course recalls 'Estolica', mentioned in the opening of the work, and 'Astolimos vir' below. Could these names all stand for *Timæus*<sup>3</sup>, or could the name be Ptolemy? The

<sup>2</sup> Cf. Robert Steele and D. W. Singer, 'The Emerald Table' in *Proceedings of the Royal Society of Medicine*, 1928, xxi, pp. 41-57.

<sup>3</sup> We should perhaps recall the *Book of Astamatis* of 'Aristotle' cited in the Arabic *Secrets of Secrets* of Al Maquin. See Robert Steele, 'Opera hactenus inedita Rogeri Baconis', Fasc. V, Oxford, 1920, p. xii. This will be cited as Steele, Fasc. V. It may be added that Steinschneider regards *Hestoles* as probably the same as the *Islaminas* mentioned several times 'in the original' as translator, and believes him to be 'ultimately Stephanos the translator of Calid'—presumably intending Stephen, son of Basilios, pupil and collaborator of Hunain ibn Ishaq. See Die 'Europäischen Übersetzungen aus der Arabischen' in *Sitzungsberichte der K.K. Akad. der Wissenschaften* (vols. cxlix and cli, Vienna, 1904 and 1905), cli, p. 44, 1905. This will be cited as *W.U.A.*



members of the body are regarded as illustrating alchemical processes. Book III, which is all in the name of Hamed, is devoted to alchemical processes expressed in terms of the Four Elements. Other names cited in Lib III are 'Hermes in libro Ephotos de significatione temporum, super mansionibus Lune . . . liber quem transtulit Aristotiles' and Forostos. In the last Book, Hebuhabes and Hamed are the two names given to the speakers—perhaps again intended to denote one person. 'Astolimos vir in *mundo*' is cited for properties of 'a great circle', and we pass to alchemical operations, and again we have elaborate symbolism.

Who are the speakers in this text? Thebed no doubt stands for Thābit ibn Qurra or Thebit ben Cora, the Sabian writer on astronomy, astrology, and occult science as well as physician and mathematician (died 901 at Bagdad). Among his translations from the Greek were the works of Euclid. The name Hermonides may well be for Hermes. As regards Hebuhamus we recall the Obkelkasam or Hebeckkasim associated with the author of the alchemical *Epistola solis ad lunam*, of which the prose Latin version often begins: 'Dixit senior Caled filius Hahmil: Intravi ego et Obkelkasam Barbam id est domum quamdam subterraneam . . .' The Arabic source of this work was found by Stapleton in the prose composition *Al Mā al Maraḳi*, a commentary on his own poetic 'Letter' or *Risalah* by the tenth century alchemist ibn Umail<sup>4</sup>. The Arabic prose work opens: 'Praise be to Allah . . . Abū 'Abdallāh Muḥammad bin Umail al-Tamīmī (May Allah be pleased with him) said: 'I and Abū'l Qāsim 'Abd ar-Raḥmān . . . entered'. Thus we are perhaps led to the correct form of Hebuhabes'. It should perhaps be mentioned that one copy of the Latin prose version of this text begins: 'Dixit Senior id est Plato Saky filius Hamil: Intravi ego et Hebeckkasim . . .'<sup>5</sup>; but I have not included it among our 'Plato' texts as the ascription occurs in only a single aberrant copy, and the Arabic author is now definitely determined. The name Senior, either attached to another name or by itself, appears as author of several Latin alchemical texts<sup>6</sup>. 'Zaik filius Hamel' is cited in at least two of the *Dicta Philosophorum*<sup>7</sup>—and this leads us to our next text.

<sup>4</sup> H. E. Stapleton in *Memoirs of the Asiatic Society of Bengal*, xii, No. 1, pp. 117–18.

<sup>5</sup> Cambridge, Trinity College 1122 ff. 39–55, XIV century. Cf. No. 136 in D. W. Singer, *Catalogue of Latin and Vernacular Manuscripts in Great Britain and Ireland dating from before the XVI century*, Union Académique Internationale, Brussels, 1928–31. This will be cited as *D.W.S. Cat.*

<sup>6</sup> Cf. *D.W.S. Cat.*, nos. 12, 134, 137, 692J, and citations in numerous texts. *Plato senior* has become *Plato senex* at least once in the Zetzner version of (b).

<sup>7</sup> *D.W.S. Cat.*, Nos. Corr. 11A and 19. The MS. from which the above-mentioned Latin *Epistola solis ad lunam crescentem* is printed by Zetzner opens: 'Dixit Senior Zadith filius Hamel: Intravi ego et Oboel, charissima barba, in domum. . . ' *Theatrum Chemicum*, 2nd edition, 6 vols., Strassburg, 1659–61, v, pp. 193–239.



(c) *Turba Philosophorum* (Sermo 45).

The very composite alchemical text entitled *Turba Philosophorum* has an allied series of commentaries (the *Allegoriæ Sapientium*) and is also commented (in common with other works) in collections of extracts and opinions, or *Dicta Philosophorum* ascribed to ancient and medieval alchemists. One section of the *Turba* (Sermo 45) bears the name of Plato, and is of interest for the disentangling of our texts, as part of its argument is similar to part of text (a). Notably the behaviour of 'the Four' is described in terms of 'corporeal and incorporeal' and of 'flight', reminiscent of the other text—or we should rather say that the passage in (a) is reminiscent of Sermo 45 of the *Turba*, a work that is perhaps, at least in its ultimate sources in Greek alchemy, our most ancient Latin alchemical document. Moreover, Sermo 45, which is headed 'Plato autem ait', closes with a version of a passage from an ancient Greek text, probably from Egypt, referred to Democritos<sup>8</sup>: 'Et scitote quod natura naturam superat, natura naturam gaudet, natura naturam continet'. The Arabic text of part of the *Turba* discovered by Stapleton includes these passages ascribed to Aflātūn (Plato), and similar passages ascribed in the Arabic text to Aras the Sage writing to King Tiyyudaras (Theodorus)<sup>9</sup>.

(d) *Liber Platonis super aptationem lapidis pretiosi scribens filio suo . . . .*

The brief text 'from Plato to his son' is known only in one Florence manuscript which I have not seen<sup>10</sup>. The following quotations are from the Riccardini Library Catalogue:

*Inc.*: 'In nomine domine Amen. Incipit liber Platonis super aptationem lapidis pretiosis scribens filio suo ex dictis philosophorum, in VII capitulis.

Capitulum primum. Capitulum primum esse dixerunt vas in quo opus fit quod multis nominibus nominaverunt . . . .'

*Expl.*: ' . . . . et tota eius intentio versatur circa mundationem lapidis et ipsius properationem [*sic*] ut superius diximus. Expliciunt capitula Platonis super aptationem lapidis pretiosi deo gratias Amen'.

<sup>8</sup> Berthelot, *Collection des alchimistes anciens grecs*, 3 vols., Paris, 1887–8, i, pp. 53, 55, trans. pp. 45, 61, etc. A translation of a Syriac version is given in Berthelot, *La Chimie au Moyen Age*, 3 vols., Paris, 1893, vol. ii. This work is cited below in note 12 as *O.M.A.* In spite of its earlier sources, we have placed (c) third on our list, as it is convenient to start with (a), the text that can be definitely related to Plato's thought, and to follow this by the Commentary on it. Recent studies of the *Turba* are referred to in Stapleton, *loc. cit.*

<sup>9</sup> Stapleton, *loc. cit.*, pp. 135, 133.

<sup>10</sup> Florence, Riccardini Lib. 119 (formerly L. III. 13) ff. 1–2 v. of the XV century. Mazzatinti X, p. 7. Cf. also Thorndike, *History of Magic and Experimental Science*, 6 vols. New York, 1923–40, ii, p. 783.



(e) *Sublimacio argenti vivi.*

This brief text is purely chemical. In the oldest copy known to me, it is anonymous<sup>11</sup>. Berthelot, however, prints it in a longer version entitled *Sublimacio argenti vivi secundum Platonem* from a Paris MS., where it forms part of a copy ascribed to Johannes, or perhaps anonymous—of the famous *Liber LXX*, usually attributed to Geber or Jābir<sup>12</sup>. In a XIV century copy in this country it is entitled *Sublimacio mercurii secundum Platonem*<sup>13</sup>. In both the copies in England as in Berthelot's 'Geber', our text follows a passage which the Geber text attributes to Socrates! Other passages in our MSS also figure among the 'Books' of Berthelot's *Liber LXX* text. Max Meyerhof discovered a copy of the original Arabic text of the *Liber LXX* in Cairo.

(f) *Liber Activarum Institutionum.*

A very long and low-grade magical text. It survives complete in XIV and XV century Latin MSS., but there are extracts surviving from the XII or XIII century, and the work is mentioned by William of Auvergne in the early XIII century. A yet earlier reference is cited by Steinschneider, who considers that Peter Alfonso, writing in the *Disciplina Clericalis* in the XI century, refers to our text as *Liber de prophetiis*<sup>14</sup>. The *De mirabilibus mundi* or *Liber aggregationis* spuriously bearing the name of Albertus Magnus, cites the work as 'Plato in libro tegimenti'. Large sections from our text are incorporated in the *De mirabilibus*. It is noteworthy that the title *Liber aggregationis* given to the 'Albertus' in printed editions, though not in manuscripts, appears also in XIII century and XIV century manuscripts of our 'Plato'<sup>15</sup>. It is known also in a Hebrew translation<sup>16</sup>. Two Arabic magical texts bearing Plato's name will perhaps prove to be versions of the same composition.

As regards the titles, the words *Anagnosis*, *Anaguenis* and *Neumich* (a form appearing in the body of the work) are referred to the Arabic word *Nawamis*, meaning Laws or Institutes<sup>17</sup>. The title *Liber vacce* Steinschneider derives from

<sup>11</sup> Cambridge, Trinity College 1400 (II) ff. 49 v–50, XIII century.

<sup>12</sup> M. Berthelot, *Archéologie et Histoire des Sciences* in *Mémoires de l'Académie des Sciences de l'Institut de France*, Serie II, Tome 49, Partie ii, pp. 308–77, Paris, 1906. The MS. is B.N. 7156 ff. 63–83, of the XIV century. The attribution to 'Jo' is erased, perhaps by a later hand. The work is 'translatu a magistro Renaldo Cremonense'. See Berthelot, *C.M.A.*, i, 320.

<sup>13</sup> British Museum, Sloane 1754 ff. 57 v–58 v.

<sup>14</sup> *E.U.A.*, No. 176, p. 44 (1905).

<sup>15</sup> Amplon. Quarto 188 ff. 103–4, has as title, 'Liber vacce sine liber aggregationis diversorum philosophorum'. Arundel 342 ff. 46–55, has as title, 'Incipit liber institutionum actiuorum Platonis . . . ' but ends, 'Expletus est liber aggregationis anguemis Platonis cum expositione omne Humayn filii Yzaac gratia dei'. Thorndike first noticed that the title was applied to both texts (ii, 723).

<sup>16</sup> See note 18.



a discussion of how to make a calf from bees, which occurs in both the Hebrew and Latin versions<sup>18</sup>. An odd explanation of the title is given in the text:— 'Inquit Humayn: Galienus dixit quod iste philosophus scilicet Plato non nominavit librum suum hunc Liber *Anagnesis* nisi propter causam.... Dico ergo quod Plato non intendit per id nisi *regimentum*'<sup>19</sup>. (See above, citation in the *De mirabilibus mundi* of 'Albertus'.)

This text has evidently passed through many recensions. Two authors in succession, named Galienus and Hunain, are described in it as having abbreviated and expounded the work of 'Plato'. In some copies there is a prologue by an anonymous writer<sup>20</sup>, which opens with an invocation to God—not to Christ or the Virgin—to confer virtue (*mores*) on one un-named to whom the treatise is addressed. He is reproached for having abused the author 'vituperatione libri mei de animalibus et libri mei in venis et libri mei in simplicibus medicinis qui dicitur liber sustentacionis propter id quod diximus in eis'. The titles of the books are clearly intended to recall works of the physician Galen, whose works, however, do not include anything that can be called *de animalibus*. Presently there is an elaborate defence of experiment still addressed to the same person 'Experiment was not forbidden to thee.... since the wise say that truth should be accepted even from a hateful enemy.... But truth is not known save by experiment without argument (*sine ratione*)'. The correspondent is further reproached for ignorance of causes, and refusal to accept the existence of properties of matter until the facts had been 'corrupted by his intellect', that is by argument. The magnet is cited as an example of natural properties that the mind would not accept, and Aristotle '*De lapidibus*'<sup>21</sup> is quoted as to many species of magnet which attract matter other than iron. The *De animalibus* of 'Aristotle' is also quoted.

There follows a whole series of marvels which are also in the *De mirabilibus* or *Liber aggregationis*, spuriously attributed to Albertus Magnus (see above). This passage has many citations from the Aristotelian conflation *De animalibus*<sup>22</sup> and from the spurious instructions from Aristotle to Alexander<sup>23</sup>. It also quotes 'filius Messie.... in libro de animalibus', of which the only other

<sup>17</sup> *E.U.A.*, No. 176, pp. 43–4 (1905).

<sup>18</sup> The anonymous Hebrew translation is from the Arabic. Cf. M. Steinschneider *Hebräische Übersetzungen des Mittelalters und die Juden als Dolmetscher*, Berlin, 1893, XX, ii, No. 521, 848–9. This work will be cited as *H.U.*

<sup>19</sup> So in Digby 71. The copies in Oxford, Corpus Christi Coll. 125 and in Arundel 342 read *tegmentum*.

<sup>20</sup> Cf. however MS. i in our list, where the prologue is called *Epistola Ameti* (perhaps for *amici*). Cf. also *D.W.S. Cat.*, No. 1066.

<sup>21</sup> Edited by V. Rose in *Zeitschrift f. deutsches Altertum*, N.F., XVI, 1875, p. 349.

<sup>22</sup> For this text, cf. S. D. Wingate, *The medieval Latin versions of the Aristotelian Scientific Corpus, with special reference to the Biological Works*, 1928.

<sup>23</sup> Some from the *Secretum Secretorum*. See Steele, Fasc. V.



citation we know is by Rhazes<sup>24</sup>. This work is not mentioned in bibliographies, and the only version, manuscripts or printed, that I have encountered is a text of excerpts in Oxford<sup>25</sup>. In view of the citation by Rhazes, we may reasonably identify the author as Johannes Mesue, the Nestorian physician (d. 857). Other works cited in the same passage are *Liber geopautre*; Costa *in agricultura*; *Liber decorationis*; Elurusefes; Galenus *in epistola de tiriaca*; Archigenus *in libro de ægritudinibus cronicis*; Tabariensis; Hermes; Bellinus; Heliagulus; Cleopatra. The first two of these names presumably refer to the same work, the *Geoponica* of Vindonius Anatolius of Beirut (IV or V century), translated into Syriac by Sergios of Resaina in the VI century, and developed thence into the *Liber de agricultura* of Costa ben Luca in the IX century<sup>26</sup>. The *De tiriaca* is a medieval pseudo-Galenic compilation; Archigenus may refer to the Greek physician practising in Rome (fl. 98–117). Tabariensis presumably refers to 'Alī al-Tabarī (fl. 847–61), physician and writer on various aspects of 'natural knowledge'. Hermes, Bellinus and Heliagulus perhaps all link with the semi-magical astrological series of *Kyrannides* texts in which these names figure<sup>27</sup>. Bellinus also figures in the *Turba*. Cleopatra might be the ancient alchemist, though the unpleasant sexual marvels may be intended to refer to the ancient writer on women's diseases. The other names we have not attempted to identify. The phrase *dixerunt* without a name is also constantly used.

The text itself opens as follows:—'This is the Book of the Active Institutes of Plato in which Hunain, the son of Zaccaria, speaks thus: Galienus prepared for abbreviation the book of Plato the philosopher entitled *Liber Anagenensis*, and his discourse was enlarged and he proceeded and discovered the true meaning thereof, . . . . Then he mastered mind and heart . . . . and that he might well order the disposition of that which he achieved, he ceased from abbreviation thereof [which the reader may be permitted to regret!] until the book of Plato was constituted from one of the abbreviated parts . . . . On my life, Galienus did not lie when he said that whereas he wished an epitome

<sup>24</sup> F. Wüstenfeld 'Geschichte der arabischen Ärzte und Naturforscher', Göttingen, 1840, No. 59 (28).

<sup>25</sup> Bodleian Library, Digby 69 ff. 23 v–27 of the late XIII or early XIV century. *Tit.*: *Liber de naturis animalium ex eis quod [sic] filius Messye dixit in libro de animalibus*.

<sup>26</sup> So G. Sarton, *Introduction to the History of Science*, Carnegie Institute, New York, 1927. . . . *In progress*, I, 370. But Steinschneider gives as the source of Costa ben Luca a *Geoponica* ascribed in the Arabic text of Luca to 'Democritus'. See *Die griechischen Aerzte in Arabischen Übersetzungen* in *Archiv f. Pathologie und Anatomie*, vol. 24, Folge XII, Tome IV, Berlin, 1891, p. 486.

<sup>27</sup> Cf. *D.W.S.*, Cat. III, Appendix I. Hermes is the reputed author of K 1. Heliagulus might be Alexius or Alexandrius, whose name is attached to K 3 and who is described as the disciple of Bolbenus or Bellinus. Some Greek and some Latin versions of these texts are from the XIII century.



of this work of Plato, he found not to his profit his abbreviation of the third book. And he said, so now counsel came to me and with speed I abbreviated this book of Plato. Then I had a fresh plan and I passed from the epitome and planned a commentary on it, for I said they are more in need of commentary than of an epitome of this work of Plato'.

There is constant confusion as to whether it is Hunain or Galienus who is speaking. But other persons take part in the discussion. An unknown interlocutor intervenes, 'one of my brethren in whose love I confide enquired of me and I replied'. After mutual compliments, the brother pleads that the work of abbreviation shall be followed by a commentary. He likens the text to a sword so firmly fixed in a scabbard that none but the writer can withdraw it. So the writer (presumably Galienus) accepted his brother's advice and turns from abbreviation to commentary. The work continues, 'And Hunain said, by my life all men should praise Galienus for this strenuous labour of soul, body and heart and for that he kept vigil to expound the books of Plato and also of Yppocrates . . . . But he postponed some of the work and I (presumably Hunain) have prepared a version using the notes of Galienus . . . . Quoth Hunain, Galienus said that the philosopher Plato called his book *Liber anegnesis* . . . .' (see above). Lengthy explanations follow, with further reference to experiments and to the errors of 'the wise'.

At length, leaving Galienus, we are launched on a long series of marvels which cannot be distinguished from the ordinary medieval collections of magical recipes as, how to make plants bow down to men, to bring rain in the dry season, to cause an appearance of fiery horsemen, to affect the quality of a house so that whoso enters its doors will be hanged, or again, so that whoso enters it will go mad. Then there are potions for sleeplessness, and to obtain foreknowledge in sleep of the fate in store. There is a certain alcoholic decoction that leads to marvellous visions, and a different alcoholic decoction may be used to banish the visions.

Is there any evidence as to authorship of the work? The name of Plato of Tivoli naturally comes to mind. He was a well known translator from the Arabic of the twelfth century who dealt with astrology, alchemy, and geomancy. He is known exclusively as a translator. In his own field he does not descend quite as low as our material. The personal name Plato was rarely used in the middle ages by either the Greeks or the Latins. We recall the relationships Senior Plato filius Hamil, Zaik filius Hamel, and Senior (*cf.* above), but cannot resolve the problem.

As to 'Galen' or 'Galiénus'. I have elsewhere hazarded the guess that this name, which is attached to several alchemical texts, and notably to a Prologue to the *Emerald Table*, may represent a real figure, and be something else than the mere use of a name of the ancient physician. It is odd that the *Emerald Table* Prologue also is given as the text of Galienus presented



by another writer <sup>28</sup>. The mention in our text of the *brethren* brings to mind the famous Brethren of Purity (or Sincerity)—the secret eclectic association at Basra about 983. Our text gives Galienus a happy relationship with a body of 'brethren'.

As regards the name Hunain the bibliographers, beginning with Steinschneider, identify him with Hunain ibn Ishāq. Our text is not, however, the kind with which Hunain customarily dealt, nor is it in his manner.

The Arundel XIV century copy bears the title *Humayn filius Zacarie*, but the Arundel copy ends 'Expletus est liber aggregationis angyemis Platonis cum expositione omne Humayn filii Ysaach'.

Thorndike mentions a work of Costa ben Luca of the early IX century, *Epistle concerning Incantations, Adjurations and Suspensions from the Neck*. This was not only erroneously attributed to Galen and to many others, but in a XV century MS. to Hunain ibn Ishāq <sup>29</sup>. Perhaps, therefore, an early Hunain having been concerned with such works as the *Epistola* and the *Liber Vacce* became confused with Hunain ibn Ishāq. The name of the translator of these books may really have been Hunain ibn Zakariyā.

(g) *Liber Platonis de tredecim clavibus sapientie maioris*.

We may close by mentioning the *Liber Platonis de tredecim clavibus sapientie maioris, translatus de arabico in latinam anno domini 1301*. The opening is 'Narraverunt quod in terra Romanorum fuit quidam philosophus qui vocabatur in arabico Platon . . . ' This work, which I have not seen, is, I believe, known only in a single XIV century Latin manuscript <sup>30</sup>.

#### MANUSCRIPTS OF

##### (a) LIBER QUARTORUM or SUMMA PLATONIS.

- i. XIV century. Paris Bibl. Nat. 5055 ff. 178–188 v.  
*Tit.*: Haec sunt verba Platonis in suis Quartis  
 absque expositione Hames quia est nimis  
 longa.  
 [Preceded by a fragment of the Commentary. See below.]
- ii. XV century. London, B.M. Sloane 692 ff. 74 v–79.  
*Tit.*: Summa Platonis.  
*Inc.*: Cum res ex eodem genera sunt, radices  
 earum unum sunt . . .

<sup>28</sup> *D.W.S. Cat.*, Introduction, I, p. xvij; and No. 26.

<sup>29</sup> Florence II, III, 214 ff. 72–4. Cf. Thorndike, *loc. cit.*, I, 652–3. In a British Museum XII century MS., Additional 22719 f. 200 v, it occurs with a work of Constantine.

<sup>30</sup> Venice, San Marco XVI, 1 ff. 20–26. I owe the *incipit* to Thorndike, *loc. cit.*, II, 780.



*Expl.* : . . . . Oportet ergo utrumque vaporum pluries  
sublimare ut totum vita cum vita in aere  
ergo vaporum aereum cum volueris inten-  
tionem et ergo conjunge. Deo gratias.  
Explicit Summa Platonis philosophi.

- iii. XV century. London, B.M. Stowe 1070 ff. 17 v-20.  
*Tit.*, *Inc.* and *Expl.* as in ii., except that the words  
'vaporem aereum' are omitted from the *Expl.*
- iv. XVI century. Orleans 290 ff. 207-9.
- v. ? ? Madrid Escorial VIII. D. 12.  
*Tit.* : *Liber qui dicitur Quartum Platonis.*  
[This manuscript is listed without date in the old  
Escorial Catalogue, but does not appear in the  
later Catalogue.]

NOTE.—The work is cited in a manuscript ascribed to Arnaldus de Villa Nova  
(1240-1311) in Cambrai, Bibl. Mun. 919 (818) ff. 145-61.

*Tit.* : De aquis compositione philosophicis.

*Inc.* : Plato philosophus magnus ait in libro suo dicto 4 rebus contrariis  
quod postquam corpus humanum fit et compositur ex elementis  
contrariis . . . .

#### MANUSCRIPTS OF

##### (b) QUARTUM PLATONIS SCOLASTICORUM

Often entitled PLATONIS LIBER QUARTORUM

which is, however, in fact a

COMMENTARY on Text (a), the PLATONIS SUMMA that is often  
called PLATONIS LIBER QUARTORUM.

- i. XIV century. Venice San Marco XVI (I).  
*Tit.* : Platonis quartus super secretis nature.  
*Inc.* : Dixit Plato, cum res ex eodem genere sint . . . .
- ii. XIV century. Paris B.N. 6514 ff. 88-101.
- iii. XIV-XV century. Paris B.N. 5055 f. 177 only. Fragment.  
F. 177 *Inc.* : Dixit Emanides Platoni, Consideravi  
res ex 4 naturis . . . .  
F. 177 v is blank. [See above (a) i.]
- iv. XV century. Bologna Univ. 138 (24) ff. 216 v-221 v.  
*Tit.* : Quartum Platonis Scolasticorum.  
*Inc.* : Dixit Plato . . . .  
*Expl.* : . . . . omnibus diebus vite sue.
- v. XV century. Bologna Univ. 303 (30) and (31) ff. 305-8, 308-38.  
F. 305 *Tit.* : Summa Theorica Platonis.  
*Inc.* : Dixit Plato . . . .  
F. 308 *Expl.* : . . . . intellige hoc.  
*Tit.* : Summa Practice Platonis.  
*Inc.* : Opera dei . . . .  
F. 338 *Expl.* : . . . . hoc fiat.



- vi. XV century. Oxford, Bodleian Library, Ashmole 1416 ff. 109–13.  
Extract.  
*Tit.*: Extractus de quartis Platonis. Plato de Quartis.  
*Inc.*: Dixit senior Plato in dyalogo suo, tractatu septimo, Nichil deceptionis mittam ad posteros qui dicuntur ex hac arte . . . .  
*Expl.*: . . . . Et qui cognovit quod quidam dictorum meorum sunt de laqueis nature. Hec est lucerna sapientis in vita eius lumen lucens, filii autem nature in loco tenebroso vexantur, quibus non lucebit lucerna quum ea sint vacui.  
[*Cf.* Zetzner (1660), V, p. 185.] Explicit Plato.
- vii. XV century. Venice, San Marco XVI (III) ff. 291–303.  
Extract.  
*Tit.*: Commentum tertie partis quarti de quartis Platonis.  
*Inc.*: Haec scientia incipit a potentia et pervenit ad actum . . . .
- viii. XV–XVI century. Bologna 270 (X) f. 185.  
*Tit.*: Quartus Platonis Scolasticarum.  
*Inc.*: In nomine dei . . . .  
*Expl.*: . . . . intellige hoc.
- ix. XVI century. Oxford, Bodleian Library, Digby 219 ff. 120–43 v.  
*Tit.*: Liber quartus Platonis (tribus partis explicatus ab Hamete filio Hasam rogatu Thebeth).  
*Inc.*: Dixit Thebeth Hames filio Hasam, Abrevia nobis quod de revelatione occultorum intellexisti, et expone librum senioris Platonis . . . .  
*Expl.*: . . . . Dixit Plato, et qui cognovit, cognovit quod quedam dictorum nostrorum etc. Hic deficiunt multa.  
This (without the last three words) is in Zetzner (1660), V, 185, as penultimate quotation, but is not in the *Summa*.  
The text is printed Zetzner *Theatrum Chemicum* (1660), V, 101–85.

## MANUSCRIPTS OF

(f) LIBER ACTIVARUM INSTITUTIONUM

or LIBER ANAGUENIS or NEUMICH

or LIBER VACCE

or TEGUMENTUM or REGIMENTUM

or LIBER AGGREGATIONIS DIVERSORUM PHILOSOPHORUM



LATIN VERSIONS.

- i. XII-XIII century. Munich Cod. Lat. Mon. 22292 ff. 68-72.  
 Extracts :  
*F. 68 Tit.* : Epistola de medicina.  
*Prol. inc.* : Conferat tibi deus mores . . . .  
*F. 70 Prol. expl.* : . . . . Explicit epistola Ameti.  
*Op. Tit.* : Prologus in librum Anguemis.
- ii. XIII century. Erfurt Amplon. Quarto 188 ff. 103-4.  
 Extracts ? (Too short to be whole text.)  
*Tit.* : Liber vacce seu liber aggregacionis diversorum philosophorum.  
*Inc.* : Primo queritur quare risus magis sequitur titillationem . . . .  
*Expl.* : . . . . significet fleubotomia predominari et odor debet etiam.  
 [Pages missing.]
- iii. XIV century. London B.M. Arundel 342 ff. 46-55.  
*Omits Prologue.*  
*Tit.* : Incipit liber institutionum actiuorum Platonis in quo Humayn filius Zacarie sic loquitur dicens :  
*Inc.* : Galienus cum preparavit ut abbreviaret librum Platonis philosophi qui nominatus est liber anguemis amplificatus est . . . .  
*Expl.* : . . . . sicut mille uiri tenuerint eum.  
 Quando vis ut attrahas absque magnete cum re que dicitur, accipe ipsum et trahet ad se si deus voluerit. Expletus est liber aggregationum anguemis Platonis cum expositione Humayn filii Ysaach gratia dei.
- iv. XIV century. Oxford, Bodleian Lib. Digby 71 ff. 36-56.  
*Prol. inc.* : Conferat tibi deus mores nobiles et te ad omnem bonitatem . . . .  
*Prol. expl.* : . . . . confert ei ab oblivione sua et multum steriliat [*sic*] intellectum suum etc.  
*Op. inc.* : Galienus cum propter amatum voluit abbreviare [*sic*] librum Platonis philosophi qui nominatus est liber anequemis . . . .  
*Op. expl.* : . . . . et non cessabit, donec dimiserit si mille eam viri tenuissent. Completur liber anequenis Platonis id est liber vacce.
- v. XIV century. Oxford, Corpus Christi Coll. 125 ff. 122 v-41.  
*Tit.* : Anaguenis Platonis sive liber Vacce.  
*Prol. inc.* : *As iv.*  
*Prol. expl.* : . . . . confert ei ab oblivione sua et subtiliat intellectum.

- Op. inc.* : Galienus cum praeparaverat librum  
 .... [as iv].
- Op. expl.* : .... donec dimiserit illud si mille eam  
 viri tenuissent. Completur .... [as iv].
- vi. XIV–XV century. Montpellier 277 (13) and (14).
- vii. XV century. Oxford, Corpus Christi Coll. 132 ff. 139–66 v.  
*Tit.*, *Prolog. inc.*, *Prolog. expl.*, *Op. inc.*, as v.  
*Op. expl.* : .... Quando vis accendere lapidem et  
 videri quasi sit inter manus magni forte,  
 et in eius manus virga ista quod fugiant  
 homines adque ex ea accipe ranam viri-  
 dem et de colla eam super pannum  
 exequiarum et madefac primum cum  
 sambuco.
- viii. XV century. Florence Bibl. Nat. II, III, 214 ff. 57–72.  
*Tit.* : Liber institutionum activarum Platonis in  
 quo Humaym filius Ysac sic loquitur.  
*Expl.* : .... Completus est liber aggregationis ane-  
 guemum maioris et minoris Platonis cum  
 expositione Imayn filii Ysac et declaratione  
 Galieni.

## HEBREW VERSION :

- ix. XV century. Munich Heb. 214.  
 Steinschneider describes this as an anonymous  
 translation from the Arabic (*E.A.U.* 1905, No. 176  
 and *H.U.*, II, Par. 521, pp. 848–9).

ARABIC MAGICAL TEXTS OF 'PLATO'  
 (Perhaps LIBER VACCE):

- x. Leyden Univ. Cod. Arab. 1251.
- xi. Madrid, Escorial Cod. Arab. 833.  
 (Both cited in M. Steinschneider 'Zur pseudepi-  
 graphischen Literatur insbesondere der geheimen  
 Wissenschaften des Mittelalters', Berlin, 1862.)



RHETORICAL AND RELIGIOUS ASPECTS OF GREEK ALCHEMY.

INCLUDING A COMMENTARY AND TRANSLATION OF THE POEM OF THE  
PHILOSOPHER ARCHELAOS UPON THE SACRED ART.

By C. A. BROWNE.

PART I.—INTRODUCTION AND TRANSLATION.

THE causes which were active in promoting the long decline of Greek science in the millennium between the second and twelfth centuries A.D. are made most apparent by following the development of that strange aberration of the human intellect known as alchemy. The side of alchemy which has been most generally discussed in the numerous treatises upon the subject is the technique of the processes that were employed in the efforts to transmute base metals into silver and gold. But there was another phase of the subject, which has been generally overlooked, and that was the use of alchemy as a theme for rhetorical and religious compositions—such as lectures, poems, prayers, and moral exhortations.

Many of the general characteristics of the European alchemical literature, which appeared in the long interval between the Crusades and the outbreak of the French Revolution, may be attributed to the influence of a single school of Greek rhetorical writers who flourished in the seventh and eighth centuries A.D. The leader of this school was Stephanos, a so-called 'œcumenical' philosopher, whose treatise of nine lectures (*πράξεις*) upon 'the Great and Sacred Art' is found in twenty-two different manuscript copies<sup>1</sup> in various libraries of Europe. The ninth of these lectures is addressed to King Herakleios in an extravagantly adulatory dedication. This monarch of the Eastern Empire is reputed to have been a great patron of alchemy, like that other later royal supporter of occultism, Rudolph II of Bohemia (1552–1612), and it is worthy of a passing note that this obsession of gold-making seems to have caused both these rulers in their declining years to be guilty of a similar neglect of the affairs of state. The reign of Herakleios extended from 610 to 641 A.D., and this enables us to fix approximately the time of Stephanos.

Accompanying the long treatise of Stephanos there are found in nearly all the European collections of such Greek manuscripts four alchemical poems attributed to Heliodoros, Theophrastos, Hierotheos and Archelaos, usually in the order named. These poems largely consist of metrical versions of parts

<sup>1</sup> The location and description of all the Greek alchemical manuscripts is given in the 'Catalogue des Manuscrits Alchimiques Grecs' published by the Union Académique Internationale, Brussels, Belgium. See also Sherwood Taylor, 'The Alchemical Works of Stephanos of Alexandria', *Ambix*, i, 116.

of the treatise of Stephanos, and from their very close resemblance in peculiarities of metre, language, and style were very evidently written by the same person. This opinion was first expressed by Reinesius<sup>2</sup> in 1634, and has recently been again announced by Reitzenstein<sup>3</sup> in his essay, *Zur Geschichte der Alchimie und des Mystizismus*. This obvious unity of authorship was also pointed out by Browne in his essay upon the alchemical poem of Theophrastos, published in 1920<sup>4</sup>. More recently Goldschmidt, in his critical examination and emendation of the text of the four poems, has cited numerous resemblances in word, thought and style, which establish beyond any question of doubt the fact that all four poems were composed by one author who lived after the time of Stephanos. Additional arguments in support of this view of single authorship of the four poems will be mentioned in the second part of the present paper.

The poem attributed to Heliodoros (whom Reitzenstein and Goldschmidt propose as the author of all four poems) contains in the title a dedication to 'Theodosios the Great King', which, unless a fictitious insertion of later date, must refer to Theodosios III, whose short reign extended from A. D. 715 to 717. So far as can be determined from the meagre evidence at our command the poetic imitations of the alchemistic treatise of Stephanos were written about this time.

Although the solecisms, repetitions, obscurities, and other faults of the treatises of Stephanos and his imitator make them exceedingly tiresome reading, the large number of extant copies of the manuscripts of their works in the different libraries of Europe is a sufficient evidence of the value which was attached to them by medieval alchemists. Their influence upon the later alchemistic writers in Latin, English, French, German, Italian and other European languages was very extensive, not as regards practical laboratory instructions, for Stephanos and his poetic imitator were not explicit upon these points, but as regards the mental attitude with which the later writers discussed their subjects. While little that is informative regarding the technical operations of alchemy can be gleaned from the treatise of Stephanos, who quotes repeatedly from the Pseudo-Demokritos, Synesios, Olympiodoros, Zosimos and other earlier writers, it was Stephanos who did the most to make alchemy a subject for rhetorical and religious compositions. It was he who set the fashion

<sup>2</sup> 'Die Nahmen Archelai, Hierothei, Theophrasti sind erdichtet und die schlimmen carmina alle eines autoris und nichts mehr als der Stephanus in versus übersetz' quoted by Kopp, *Beiträge zur Geschichte der Chemie*, p. 445.

<sup>3</sup> 'Die vier Gedichte, die wir nun ohne weiteres dem gleichen Verfasser, einem Philosophen Heliodor, zuschreiben dürfen, entsprechen also den neun Vorlesungen des Stephanos, etc.' *Nachrichten von der königlichen Gesellschaft der Wissenschaften zu Göttingen, Philologisch-historische Klasse*, 1919, pp. 1-37.

<sup>4</sup> 'The Poem of the Philosopher Theophrastos upon the Sacred Art; A Metrical Translation with Comments upon the History of Alchemy', by C. A. Browne, *Scientific Monthly*, Sept., 1920, pp. 193-214.



for the interjection of the prayers, invocations, exclamations, moralizations, and allegorical comparisons which make up so large a part of the later literature of alchemy, and it was Heliodoros, the conjectured poetic imitator of Stephanos, who first paraphrased his turbid sentences in wretched iambic meter.

In the work cited above the writer has given a metrical translation of the poem of Theophrastos upon the Sacred Art with some general comments upon the history of alchemy in the Byzantine period. In the present paper it is desired to give a similar translation with commentary of another of these alchemistic works, and the one selected is the poem of the so-called ' Philosopher Archelaos upon the Sacred Art '. This poem, in contrast with that of Theophrastos, is an exposition of the philosophic side of Greek alchemy and requires, therefore, a discussion somewhat different from that contained in the writer's previous article, to which the reader is referred for a historical introduction to the subject.

A translation of the poem of Archelaos follows ; notes, commentary, and discussion will be given in Part II, to appear in a future number of *Ambix*.

POEM OF THE PHILOSOPHER ARCHELAOS UPON THE SACRED ART.

- The schoolmen's wholly wise and sacred art,  
 Though theoretic, finds in technic use  
 Its active energy and force, and shows  
 In learned practice labor's perfect end :
- 5 For practice is of theory the base.  
 Just as the soul, without its body's form,  
 Is powerless and wholly without strength  
 To do or make a thing that can be felt  
 As long as she outside her body stays :
- 10 But when united with this instrument  
 She doeth every work and thus maintains  
 The thoughts of wisdom over critic's wiles.  
 Thus know the work, O thou who seekest here  
 Initiation in the truth to gain
- 15 And knowledge of its facts, a science which  
 In theory and practice finds its end.  
 By linking soul to body in one bond,  
 Though perfect combination of the two  
 The ' Sacred Art ' makes both to live as one,
- 20 When spirit comes a third to crown the whole.  
 Exert thy mind in contemplation, first  
 Of all philosophy, of secret words  
 And intricate ideas of ancient lore.  
 Then strive, assisted by thy technic skill,
- 25 By wise experiment and judgment too,  
 To know the union of the elements,  
 Their mingled qualities, and how to blend  
 By wise intelligence each one with each  
 And bind them firmly for the art's one end,

- 30 Which bringeth opulence and useful gain.  
 Unless thou hast them, soul and body both,  
 (I mean in theory and practice too)  
 Thou can'st gain nothing to assist thy need.  
 So, therefore, as a craftsman wise and skilled,
- 35 Lay hold upon this art and realize  
 Experiment to be my words' intent.  
 With inspiration from above take heart  
 And strive with certain aim to reach the mark.  
 The work which thou expectest to perform
- 40 Will bring thee easily great joy and gain  
 When soul and body thou dost beautify  
 With chasteness, fasts and purity of mind,  
 Avoiding life's distractions and, alone  
 In prayerful service, giving praise to God,
- 45 Entreating him with supplicating hands  
 To grant thee grace and knowledge from above  
 That thou, O mystic, may'st more quickly know  
 How from one species to complete this work.  
 Hear then this introduction to my theme,
- 50 As I speak sentences of wise concern,  
 A set of doctrines easily acquired,  
 With nothing vain or troublesome at all.  
 The work is rather easy and concise  
 And brings prosperity unto the wise.
- 55 Enthralled with awe I thus begin my strain.  
 O art, well tried and perfect, of the wise !  
 O learned thoughts which rhetoricians speak !  
 O comely beauty of the single stuff :  
 O brilliant form, refulgent and most bright !
- 60 O wondrous wonder of thrice happy fame  
 A marvel of one substance most divine !  
 For nature doth in nature take delight  
 And every nature conquers and controls  
 A kindred essence having. She is bound
- 65 And fixed and quickly penetrates with joy  
 A body white, though bodiless herself,—  
 A kindred form she loves and there abides.  
 Though bodiless she wholly joins therewith  
 And knows it as her proper dwelling place.
- 70 She enters as beneath a roof, remains  
 And guards it all nor does she suffer it  
 To flee ; instead, by making it abide  
 Through inner force, its nature she transforms  
 Adorns and shapes. She brings it into fire
- 75 To strive with fire and quickly makes it win  
 Against the rush and burning heat of flame  
 By causing there a shapely change of form.  
 For body with non-body cannot join  
 Unless its nature be made bodiless,
- 80 Changed from corrupt to what is incorrupt  
 And be unloosed from matters heavy yoke.



- Rejecting earthliness she is refined  
And over every nature thus prevails.  
Completely freed from matter she ascends,  
85 Becomes a spirit next and nature rules  
By penetrative force and holdeth fast.  
This work is simple, if a man be wise  
Enough to join together dry and wet,  
And hot with cold, the which, though opposites  
90 In quality, can yet be joined as one.  
Mix them together, each to each, when'er  
Thou strivest, as a wise and shrewd adept,  
To work upon these four-fold elements.  
Attempt their union while, with mystic sense,  
95 Thou puttest what is masculine above  
While what is feminine is placed below.  
Now Fire, as something volatile and light,  
As well as warm and dry, cannot unite  
With Water's nature, which is moist and cold  
100 And, from its heaviness, tends strongly down.  
But Air, the mediator warm and moist,  
With speed unites the two and makes them one.  
So likewise Earth, as something cold and dry,  
A heavy wetless mass, cannot combine  
105 With buoyant Air's humidity and heat,  
But Water with its nature cold and moist  
Allays their enmity and makes them join,  
She calls and ties them both in friendly bonds,  
Unites their qualities and makes them one.  
110 Now Water heated in the flame of fire  
Is vaporized and wholly changed to air.  
So Earth on being squeezed and decomposed  
With humid ferments will be liquified  
And from its heavy matter run in streams  
115 Becoming Water with the wet embrace  
Of liquid quality, for it will flow.  
So Fire, on being quenched, will lose its heat  
Which rises up, and turn to earthy dross,  
A heavy mass, that quite resembles Earth.  
120 Warm Air, when heated in a burning flame,  
Will turn to Fire and scorch with seething heat.  
It is not right to change the wet to dry  
Or reconvert the dry to wet again  
Unless their natures thou dost wholly change  
125 Which number three. Therefore when altering  
The moist to dry thou must expel the wet  
By closest union with the hostile dry.  
So also thou may'st cause the dry to flow  
Like Water's stream, unspeakably divine,  
130 For by its combination with the moist  
The dry is changed into a liquid flood.  
Again a heavy nature cannot change  
To what is buoyant, volatile and light

- Unless its nature thou dost first transform.  
 135 Refined in fire it undergoes a change  
 To spirit, being joined to what is light.  
 To make a spirit something corporal,  
 That can be felt and managed with the hands,  
 Is possible for no one, unless first  
 140 The body be refined until it have  
 A spirit's subtle nature and be purged  
 Of matter's earthiness, thus being made  
 More like the spirit which it is to keep.  
 For thus the incorporeal acquires  
 145 Without restraint a body's guise and form.  
 Then, having quickly won a shape, she takes  
 The body's image which is fair to see.  
 And clad therein, as with the purple robe  
 Which rulers wear, she seems most fair and bright.  
 150 When incorporeal she is akin  
 To that one nature, light and bodyless,  
 Of milky hue, which takes the imaged form  
 Belonging to the brilliant class and kind  
 Of Luna's whitened orb, whom she salutes  
 155 And who controls and loves her in return.  
 She loves, controls and pleases, being pleased,  
 For friendly natures one another love,  
 Control and shape with penetrating force.  
 The soul from body only can be freed  
 160 By art as any learned man must know  
 Who has been exercised in things divine.  
 Take and remove her from the body's hold  
 And cleanse away all blackness hid within  
 That veils her shining loveliness with gloom.  
 165 With streams make her, the soul, as pure as snow ;  
 Wash out again the murkiness and shade  
 For thou, on cleansing it, wilt bring to view  
 A wondrous splendor and a brilliant sight.  
 Seize firm the nature lurking there within,  
 170 Enshrouded in the body's heavy mass,  
 As in a dingy prison's darkened cell.  
 A craftsman wise, thou wilt remove this gloom  
 By trituration and by frequent baths,  
 Not being vexed because of many toils.  
 175 But purify it skilfully and well  
 By guiding it in water most divine.  
 Next calcine it by plunging into fire,  
 Remove its rust, then make it silver white  
 By washing off its swarthy blackened stains,  
 180 And thou wilt quickly see a longed-for sight.  
 On being dipped in water of the sea  
 Its substance gleams below which once was like,  
 The ocean's hue ; make bright again and cleanse  
 Until its earth is loosened like a wave  
 185 And rises easily to form a cloud



- Borne wholly up and running down in streams ;  
of matter showing not the slightest trace  
But only of its form the brilliant sight,—  
The whiteness many formed which thou didst long  
190 To see and clearly view and which descends  
Completely into water's running stream,  
Like some fair nymph of shining lustrous gold  
Who shows her golden gleaming countenance  
And radiantly swimming hides herself  
195 Within the Nile's swift current, honey sweet.  
Surpassing sunlight in her brilliancy  
She now appears above, no longer hid,  
A splendor gleams without and from within  
Which overpowers the eyes of those who look.  
200 With longing she cries out at what she sees ;  
She wonders, from her body being freed,  
How she again abides, a spirit like ;  
So modified is she in shape and form  
That she shows nothing more of darkened mist  
205 In her at all, but splendor wears instead,  
Her gloom exchanged for white and gleaming light.  
She sees outspread her former instrument,  
All motionless and without speech and life,  
Awaiting resurrection from its tomb,  
210 The prey of many tortures and assaults.  
With bright and joyous looks she draweth near  
And thus accosts her body's prostrate form  
With voice serene, by signs though not by words :  
    " Come out ! Arise from Hades' dismal pit !  
215 Cast forth from thee the darkness and the gloom !  
Tear off again the shroud of death,—the robe  
Which hitherto has held thee one condemned,  
In which so many heatings were endured  
That thou may'st show thyself refined throughout,  
220 Transformed like spirit and revived  
By her the soul, who lately rose from thee  
And who will quickly live in thee again  
When spirit comes a third to crown the whole.  
A corpse thou wert before and all corrupt,  
225 Within the tomb, didst dwell, devoid of life,  
Of form, of breath and wholly without grace.  
In battle vanquished thou dost shun the strife.  
In close contested struggle overcome  
Thou seemest unto all a fugitive.  
230 For overcome within thou do'st not stay  
To fend the darts that strike thee from without.  
By swimming off on water's element  
Thou do'st not wait the female joined to thee  
In wedlock as desired ; thou do'st not check  
235 The clash of female conflict, but thy bloom  
Is ravaged by her might. A blackness dense  
Conceals thy shining beauty in a tomb.

- A breathless lifeless corpse, in cerements wrapped,  
 Thou hast thy countenance alone exposed.  
 240 In nakedness cast out, to those who see,  
 Thou seemest without voice for life to wait  
 And say by sign ' Where is the living soul  
 Which left me once and went away alive :  
 Unite and make me bright with her again,  
 245 My likeness being now defiled in gloom.  
 Immerse my form and wipe it off most clean  
 That I may be a shining dwelling place,  
 Made fair and glorious, for thee, O Soul !  
 No blackness bearing and no stain of filth  
 250 But rather like a strong and mighty light  
 Which sheds its beams, a splendor without stain,  
 That I may thus deserve a victor's crown ;  
 Reconquering the one who fought with me  
 In combat close, a fair home I will show—  
 255 A worthy domicile for both my guests—  
 The spirit and the purifying soul ' !  
 These three united in a compact bond  
 Of firm affection and unbreaking love  
 Shall dwell together, unified as one,  
 260 The body, soul and spirit ; not subdued  
 In fellowship but rather beautified.  
 They fight the fire with light and cripple fire  
 By tinging as they wish ; no fear have they,  
 A stronghold triply fortified and firm,  
 265 To one another intimately joined  
 In fourfold manner by the elements.  
 With penetration they abide ; they tinge  
 And give to bodies every kind of hue.  
 The element from fire can enter fire  
 270 And overcome its burning heat and flame.  
 The element that comes from what is wet  
 Can clarify and wholly change in shape  
 All natures that partake of nectar's form.  
 The element of earth can tinge and clear  
 275 All bodies generated from the dry.  
 The element of air can quickly pierce  
 The warm and moist and sinking to the depth  
 Of bodies keeps their loveliness intact.  
 Then having thus prepared thyself, O man !  
 280 Thou shalt be perfect, shrewd and highly wise,—  
 As one who theory to practice puts,  
 Regarding nothing of my precepts vain,  
 Thy thoughts not turning from those great adepts,  
 Of whom I spake, to things which are not right.  
 285 Unless from torpor thou dost turn to toil  
 Untainted happiness is never thine,  
 Thy work is wholly profitless instead.  
 Believe my words and pray that grace and strength  
 May come with inspiration from above.



- 290 From earthly thoughts and life's corruptions flee  
Since they are vain and like a shadow pass.  
For this display of pomp and opulence,  
Which mortals love, shall wholly be destroyed.  
Faith, hope and charity alone abide
- 295 Made perfect by the light of holy deeds.  
From thy inquiries I have not concealed  
The word of knowledge but have given thee  
A brief judicious training in the art,  
A practice that is easily acquired,
- 300 A quick initiation in the works  
Of wise and perfect men-who, by the toil  
Of godly deeds and noble practices,  
Have trained their minds and reason to inspect  
The theory and practice of that art
- 305 Which rhetoricians teach and which doth cause  
The theories of mind, when carried out,  
To manifest themselves in wise results.  
If thou, investigator wise and shrewd,  
Shouldst question all the genera of things
- 310 Described by wise men in their learned books,  
Then thou wilt find, for thy reward, a prize  
Which bringeth thee redemption from thy sins,  
A heritage of everlasting joy :  
Thy body mortify by serving God :
- 315 Thy soul let wing to look on godliness :  
So shalt thou never have at all the wish  
To do or think a thing that is not right  
For strength of soul is manliness of mind.  
Sagacious reasoning and prudent thought.
- 320 All passions purify and wash away  
The stain of carnal joys with streams of tears  
Which flood thy weeping eyes, revealing thus  
The pain and anguish of a contrite heart.  
Mind well Gehenna's fire and Judgment Day.
- 325 So live that thou deservedly mayst see  
The shadowless and everlasting light  
And from thy lips let tuneful praise ascend  
With choirs of angels unto God most high  
Who rules above with wisdom, king of all,
- 330 The Father with the Word and Holy Ghost,  
For all eternity and endless time
- 332 Forever and forever more. Amen.

T'AO, THE RECLUSE (A.D. 452-536).  
CHINESE ALCHEMIST.

By WILLIAM H. BARNES\*, M.Sc., Ph.D., and H. B. YUEN †, M.Sc.

INTRODUCTION ‡.

IN 1932, Professor Tenney L. Davis and the late Dr. Lu-Ch'iang Wu<sup>1</sup> published a short paper<sup>2</sup> on T'ao Hung Ching, eminent Chinese physician and alchemist of the fifth and sixth centuries A.D. Their data were taken largely from the *Lieh Hsien Ch'üan Chuan* (Complete Biographies of the Immortals). As Davis and Wu have pointed out, this treatise gives a clearer description of T'ao Hung Ching and of the events of his life than frequently is the case with respect to the persons therein immortalized. Discounting certain obviously fabulous and *hsien* (immortal) characteristics, T'ao emerges as a learned, hard-working, persevering, tactful and retiring scholar possessing a keen appreciation of beauty in calligraphy, in music and, particularly, in nature.

In 1935, Ts'ao Yüan-Yü of the Chekiang Provincial Medical and Pharmaceutical College at Hangchow (Chekiang Province) published an article (in Chinese) in the local students' periodical<sup>3</sup> on *T'ao, the Recluse, and His Published Writings*. This paper contains information derived essentially from two authoritative dynastic histories, the *Nan Shih* and the *Liang Shu*. Although it repeats, necessarily, some of the facts gleaned by Davis and Wu, it presents interesting additional information regarding T'ao's scientific and technical knowledge and includes a more extensive bibliography of works attributed to his brush. It thus etches a little more sharply the outlines of T'ao's thoughts and achievements. He becomes more real to us and we feel that we know him slightly better than we did before.

For these reasons one of us (H. B. Y.) undertook a careful translation of Ts'ao's paper subject to discussion, debate and suggestion on the part of the other and, when necessary, consultation with senior members of the Chinese community and with Chinese pharmacists and a Chinese physician in Montreal. The result is presented herewith. Due to the present situation in China, a previously adopted safeguard<sup>4</sup> of submitting the manuscript to Mr. Ts'ao for comment was deemed inadvisable and probably futile.

In the translation we have attempted to follow the original as literally as practical, even at the possible expense of perfectly acceptable English. As usual, transliterated characters are identified by their numbers (enclosed in

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round brackets immediately following the transliteration and in the same order as the characters) in Giles' dictionary <sup>5</sup>. Names of persons are followed (in a second set of round brackets) by their numbers in Giles' biographical dictionary <sup>6</sup> prefixed by the letter *B*. Words, phrases or comments not in the original are indicated by square brackets, as also are translations of Chinese characters retained (in transliterated form) in the text. Other brackets (not enclosing Giles' numbers), quotation marks and dots (indicating omissions) in the translation have been transcribed from the original.

As previously mentioned elsewhere <sup>4</sup>, it is usually impossible safely to translate the titles of books, particularly of the type involved in the present study, unless the complete texts thereof are available or unless at least something definite is known about their subject matter. Hence, some of the titles as translated in the notes should be accepted only with caution.

The majority of the notes are based on information obtained from Giles' dictionary <sup>5</sup>, direct quotations therefrom being indicated by the designation (Giles). Considerable assistance also has been obtained from the *Tz'u-yüan* <sup>7</sup>, particularly with respect to the correct interpretation of associated pairs of characters and in other ways specifically indicated in the notes.

#### TRANSLATION.

T'AO YIN-CHÜ HO T'A-TI CHU SHU

(10831, 13276, 2987, 3945, 10508, 10978, 2566, 10024).

T'AO, THE RECLUSE, AND HIS PUBLISHED WRITINGS.

[by]

Ts'AO YÜAN-YÜ

(11636, 13744, 13540).

Everyone who has studied the history of Chinese medical and chemical science knows of that man of great renown, T'ao Yin-Chü (*B.* 1896), who lived in the fifth and sixth centuries. Yin-Chü (13276, 2987) [The Recluse] was the name he gave himself when he was in seclusion on Chü Ch'ü Shan (2947, 3062, 9663) <sup>8</sup>. His name was Hung-Ching (5282, 2143), [also] T'ung-Ming (12294, 7946) <sup>9</sup>. During his [life] time his influence was felt in the politics of the day and thus it is that there are records of him in both the *Nan Shih* (8128, 9893) <sup>10</sup> and the *Liang Shu* (7021, 10024) <sup>11</sup>. Although they do not differ very much, the *Nan Shih* has the more complete account.

From these two authentic records, we know that he was born in Mo Ling (8005, 7235) <sup>12</sup>, Tan Yang (10618, 12883), in the reign of Sung Wên Ti (10462, 12633, 10942) (*B.* 1315), in the twenty-ninth year of Yüan Chia (13744, 1158) and died in the reign, Liang Ta T'ung (7021, 10470, 12269), year two, (A.D. 452-536) after having lived to the age of eighty-five <sup>13</sup>. Of the many [historical] traces [of his life and work], some are introduced herewith.

Even when T'ao was young he was different from ordinary children. At the age of four [or] five he would practise writing characters in the ashes with

a stick. At the age of ten he came into possession of the *Shên-Hsien Chuan* (9819, 4449, 2703) [A Biography of the Immortals], written by Ko Hung (6069, 5252) (B. 978)<sup>14</sup> of the Chin (2070) dynasty, and he studied it with great diligence. He once<sup>15</sup> said to others, 'looking up at blue clouds, the white sun then is not so far'<sup>16</sup>! This statement reveals the depth of mind that is characteristic of his whole life. So at an early age he had already set the helm for his whole life. It is said that he 'had read ten thousand volumes, did not know a single thing and thought it was a great shame'<sup>17</sup>. [He] was skilful on the *ch'in* (2109) [lute]<sup>18</sup>, at *ch'i* (1032) [chess]<sup>19</sup>, at writing *ts'ao* (11634)<sup>20</sup> and *li* (7005)<sup>20</sup>. Thus we see that he had many talents and was well-versed in many arts. In consequence, before the age of twenty he occupied the official position of Shih Tu (9915, 12069) [Tutor]<sup>21</sup> to the Wangs (12493) [Princes]<sup>21</sup>. But he soon resigned to go to Chü Jung Chü Ch'ü Shan (2947, 5754, 2947, 3062, 9663) (the present Mao Shan (7689, 9663))<sup>8</sup> to learn Tao (10780)<sup>22</sup>. That was in the tenth year of Yung Ming (13504, 7946) of the reign of Ch'i Kao Ti (1074, 5927, 10942) (B. 714) (A.D. 492)<sup>23</sup>; the same year in which the famous scholar Shên Yo (9849, 13349) (B. 1702) compiled the *Sung Shu* (10462, 10024)<sup>24</sup>.

On the Mao Shan he lived the life of an immortal; thus, to quote the *Nan Shih*, '... he covered the famous hills, searching for the elixir of immortality. Being agile and fond of nature, whenever he came to a brook or mound he would always linger there, citing poetry continually. . . . In the first year of Yung Yüan (13504, 13744) [A.D. 499]<sup>25</sup> he built a three-storeyed building; Hung-Ching lived on the upper floor, his disciples on the second and guests used the ground floor. He kept himself secluded; only a servant had access to his quarters. Originally, he was skilful on horseback and efficient in archery. In his later years he no longer practised these but listened to the *shêng* (9869)<sup>26</sup> being played. He loved especially the wind blowing through the pines, the grounds had many pines. He was filled with joy when he heard them. Sometimes he would be seen alone over the hills and streams and to those who saw him he appeared to be a *hsien* (4449) [Immortal]'. So we see that he thoroughly enjoyed life in seclusion.

He was a very industrious person. Be it *yin-yang* (13224, 12883)<sup>27</sup>, *wu-hsing* (12698, 4624)<sup>28</sup>, *fêng-chio* (3554, 2215)<sup>29</sup>, *hsing-suan* (4602, 10378)<sup>30</sup>, *shan-ch'uan* (9663, 2728)<sup>31</sup>, *ti-li* (10956, 6879)<sup>32</sup>, *fang-yüan* (3435, 13734)<sup>33</sup>, *ch'an-wu* (360, 12777)<sup>34</sup>, *i-shu* (5380, 10053)<sup>35</sup>, *pên-ts'ao* (8846, 11634)<sup>36</sup>, there was not one in which he was not skilled. He also possessed an ability for practical work. For instance, he once constructed a *hun-t'ien i* (5231, 11208, 5455) [an astronomical or, more probably, an astrological instrument] and prepared two *tan* (10618) [alchemical drugs] which he presented to the Liang (7021) Emperor Wu (12744) (B. 720)<sup>37</sup>. Of these things, history has recorded, 'both were precious'. It is evident, therefore, that he was skilful at preparations. One time Liang Wu Ti expressed a desire to appoint him into officialdom. [T'ao] painted two cows, one at liberty in the grass and water, and another with a golden halter



being driven by a man with a staff. Wu Ti, realizing that he did not care for any position of rank, allowed the matter to drop. It appears from this that [T'ao] also painted.

His best-known work probably is '*Ming I Pieh Lu*' (7940, 5380, 9155, 7386) [The Separate Records of Famous Physicians]<sup>38</sup>. Actually before his time there was the '*Shên Nung*<sup>39</sup> *Pên Ts'ao Ching*' (9819, 8408, 8846, 11634, 2122) [The Pên Ts'ao Classic of Shên Nung]<sup>40</sup>. It is probable that from the time of Ch'in (2093)<sup>41</sup> and Han (3836)<sup>41</sup> many medical authorities had contributed their knowledge of methods of treatment and of *yao* (12958) [drugs] to this work. It is said that it contained sections on herbs, grains, vegetables, fruits, trees, soils, minerals, insects, crustacea, fish, birds, mammals, totalling 365 kinds of medicinal substances in all. T'ao Yin-Chü enlarged the number to 730. However, at present not much of its contents is known to us. It is clearly stated in the '*Pên Ts'ao Kang Mu*' (8846, 11634, 5900, 8080) [A General Survey (or Summary) of Pên Ts'ao]<sup>42</sup> of Li Shih-Chên (6884, 9921, 599) [of the] Ming [dynasty, A.D. 1368-1643] that 307 kinds of medicinal substances [contained therein] were taken from T'ao's published work on drugs. And in it [*i. e.*, the *Pên Ts'ao Kang Mu*] the republished *Ho Yao Fên Chi Fa Tsé* (3947, 12958, 3506, 812, 3366, 11652) [Rules for Compounding Medicines] of T'ao is of great interest and some [of these Rules] are presented as follows.

'In the case of medicinal substances in pills or powder—cut fine and [then] dry. Then pound separately or together according to directions. [In the case of] wet or moist medicinal substances—as *t'ien hsing tung* (11208, 4589, 12246)<sup>43</sup> and *ti huang pei* (10956, 5124, 8780)<sup>43</sup>—first add slight excess<sup>44</sup>. Cut, dry and pound. Then dry again. If [the weather is] humid or rainy, dry over a low fire. When dry, stop, cool and pound'.

'When sifting pills powder<sup>45</sup>, use a double [thickness of] fine-weave *chiian* (3139) [silk]. After each one [*i. e.*, powder] is sifted, mix repeatedly in a mortar [and] pound several hundred times. [The mixture is] considered [to be] satisfactory when [its] colour is uniform'.

'When decocting [medicinal] draughts, a slow fire to cause slight boiling [*i. e.*, simmering] is desirable. [Use] water according to prescription; for approximately 20 *liang* (7010)<sup>44</sup> of drugs use 1 *tou* (11427)<sup>46</sup> and concentrate to 4 *shêng* (9879)<sup>46</sup>. This is the standard [method]'.

'When medicating wine, [the drug] must be cut fine and held in a raw-silk bag. After it is put into the wine, seal tightly. Reckon the days from winter to summer. Take out the residue [which] can be dried, pulverized slightly and used again. It can also be taken separately [*i. e.*, without the wine] . . . '

'When wax is used in pills, it is melted, thrown into a small quantity of honey, stirred and then blended with the drugs'.

'When honey is used. Always first boil over fire. Skim off froth. Obtain a slight yellow colour. Then the drug for the pill will not spoil after a long time'.

As shown by the foregoing writings, these methods of blending, surprisingly enough, are in harmony with modern science. In addition, T'ao's knowledge regarding the nature, preparation and uses of drugs is praiseworthy [and] illustrations are introduced herewith. For instance, in the preparation of 'yin hsieh' (13253, 4369) [silver dust] he knew that first yin (13253) [silver] reacts with hung (5266) [mercury], then [that] heat is employed to change it to a fine powder. For instance again, he knew that 'shui-yin' (10128, 13253) [mercury] is obtainable from chu-sha (2544, 9620) [red powder, *i. e.*, cinnabar] by roasting. He distinguished 'tan-sha' (10618, 9620) [cinnabar] from 'hsiung-huang' (4699, 5124) [realgar] and 'tz'ü-huang' (12397, 5124) [ochre], saying that they could not be employed interchangeably<sup>47</sup>. Regarding 'ch'ien-tan' (1732, 10618) [red lead], he knew that it is obtained from molten ch'ien (1732) [lead]. Concerning 'kang' (5903) [steel], he knew that it was prepared from shu (10051) [wrought] and shêng (9865) [cast or unwrought] t'ieh (11156) [iron]. But [that which] indicates most knowledge is his recognition that 'ch'ien-fên' (1732, 3519) [white lead]<sup>48</sup> (ancient name: fên-hsi (3519, 4157) [white lead]<sup>49</sup>) is prepared from ch'ien (1732) [lead] and not from hsi (4157) [tin]. From earliest times, men often could not distinguish between the two metals, lead and tin<sup>50</sup>. Even later, in the T'ang period [A.D. 618-907], many scholars did not know the distinguishing characteristics of lead and tin.

Because T'ao Yin-Chü was one who valued experiments, what he stated is reasonable. As, for instance, he said of the following:

*Shih-hui* (9964, 5155) [lime, possibly limestone]. 'Near mountains occurs a rock of a greenish-white colour. Construct a furnace. Burn [this rock in the furnace] to a finish. Treat with water. Heat is evolved immediately and it [the calcined rock] disintegrates.'

*Tz'ü-shih* (12406, 9964) [loadstone]. 'That which is good can suspend and attract three separated needles in line'.

*Hu-p'o* (4922, 9418) [amber]. 'According to old opinions, *sung-chih* (10449, 1792) [pine resin] is transformed [into amber] when it has been in the ground for a thousand years. Now, when burned, [amber] emits again *sung-hsiang ch'i* (10449, 4256, 1064) [vapour of pine resin] . . . [Amber] is genuine only when it picks up particles after being rubbed warm in the palm of the hand'.

His observations and explanations approach those of the present day. The possession of these accomplishments in the fifth and sixth centuries is indeed wonderful.

According to the contents of the *Nan Shih*, T'ao's works also comprise:

*Hsüeh Yüan* (4839, 13718)<sup>51</sup>, *Hsiao-Ching Lun-Yü Chi Chu* (4334, 2122, 7475, 13626, 906, 2537)<sup>52</sup>, *Ti Tai Nien Li* (10942, 10547, 8301, 6924)<sup>53</sup>, *Hsiao Yen Fang* (4349, 13133, 3435)<sup>54</sup>, *Chou Hou Pai I Fang* (2474, 4025, 8560, 5342, 3435)<sup>55</sup>, *Ku Chin Chou Chün Chi T'u Hsiang Chi Yao* (6188, 2027, 2444, 3273, 923, 12128, 4288, 906, 12889)<sup>56</sup>, *Yü Kuei Chi* (13630, 6465, 923)<sup>57</sup>, *Ch'i-*



*Yao Hsin Chiu Shu Su* (1055, 12954, 4574, 2289, 10053, 10321) <sup>58</sup>, *Chan Hou Ho Tan Fa Shih* . . . (267, 4021, 3947, 10618, 3366, 9984) <sup>59</sup>.

But from various books I have collected the following works, although among them is a large number falsely ascribed to him by later people.

- (1) *Têng Hsien Yin Chüeh* (10857, 4449, 13276, 3225) <sup>60</sup>.
- (2) *Chên-Ling Wei Yeh T'u* (589, 7222, 12612, 12991, 12128) <sup>61</sup>.
- (3) *Chou Shih Ming T'ung Chi* (2450, 9978, 7951, 12294, 923) <sup>62</sup>.
- (4) *Ts'ao-T'ang Fa Shih Ch'uan* (11634, 10760, 3366, 9909, 2740) <sup>63</sup>.
- (5) *Lao Tzu Chu* (6783, 12317, 2542) <sup>64</sup>.
- (6) *Chên-Jên Shui Ching* (589, 5624, 10128, 2170) <sup>65</sup>.
- (7) *Wu Ching* (12742, 2170) <sup>66</sup>.
- (8) *Yao Tsung Chüeh* (12958, 12010, 3225) <sup>67</sup>.
- (9) *Chên Kao* (589, 5953) <sup>68</sup>.
- (10) *Lien Hua Tsa Shu* (7151, 5001, 11454, 10053) <sup>69</sup>.
- (11) *T'ai-Ch'ing Chu Tan Chi Yao* (10573, 2188, 2571, 10618, 906, 12889) <sup>70</sup>.
- (12) *Ho Tan Chieh Tu* (3947, 10618, 1477, 12089) <sup>71</sup>.
- (13) *Fu Êrh Fang* (3727, 3343, 3435) <sup>72</sup>.
- (14) *T'ao Yin-Chü Chi* (10831, 13276, 2987, 906) <sup>73</sup>.
- (15) *T'ai-Ch'ing Yü Shih Tan Yao Yao Chi* (10573, 2188, 13630, 9964, 10618, 12958, 12889, 906) <sup>74</sup>.
- (16) *Ku Chin Tao Chien Lu* (6188, 2027, 10783, 1659, 7386) <sup>75</sup>.

It is a pity that a large section of them has been lost.

We see from the conduct of T'ao Yin-Chü and from his works that he was an extraordinary man. The reason for writing this article is to enable everyone to understand that success in anything must depend upon intelligence, industry, environment and longevity. He [T'ao] was complete in every respect and so becomes an outstanding personage in the history of medicine and chemistry.

#### END OF TRANSLATION.

#### BIBLIOGRAPHY AND NOTES.

- <sup>1</sup> An obituary notice by Professor Davis appeared in *J. Chem. Education*, 1936, xiii, 218.
- <sup>2</sup> Davis, Tenney L. and Wu, Lu-Ch'iang, *J. Chem. Education*, 1932, ix, 859-62.
- <sup>3</sup> Ts'ao Yüan-Yü, *The Chekiang Medical and Pharmaceutical Student's Journal* (Chinese title not available), 1935, Autumn, 173-6.
- <sup>4</sup> Barnes, William H., *J. Chem. Education*, 1936, xiii, 453-7.
- <sup>5</sup> Giles, H. A., *A Chinese-English Dictionary*, 1912.
- <sup>6</sup> Giles, H. A., *A Chinese Biographical Dictionary*, 1898.
- <sup>7</sup> *Tz'ü-yüan* (12402, 13704) (Commercial Press), Shanghai.
- <sup>8</sup> (a) Chü Ch'ü Shan (now the Mao Shan) in the district of Chü Jung (see later in the translation). According to Davis and Wu <sup>2</sup>, T'ao 'named his residence the *Hua-Yang* Retreat, and he used this same name in signing his correspondence. He became known as the Hermit or Saint of *Hua-Yang*', (i. e., as *Hua-Yang Yin-Chü*). This name is confirmed by the *Tz'ü-yüan* <sup>7</sup> (Hsü, p. 125) which states that later T'ao employed the name *Hua-Yang Chên-Jên* (5005, 12883, 589, 5624), the 'Pure Man' of *Hua-Yang*. The term *Chên-Jên* is a typical Taoist appellation, frequently as an honourable designation for a Taoist priest,

The *Chên-jên* is 'a being for whom objective existences have ceased to be, and in whose mind positive and negative are ONE' (Giles). The *Tz'ü-yüan* also notes the fact mentioned by Davis and Wu<sup>2</sup> that T'ao was not afflicted with illness at the time of his death.

(b) *Shan*; mountain.

<sup>9</sup> Hung-Ching *tzü* T'ung-Ming; *tzü* (12324) simply identifies T'ung-Ming as a special name or style assumed at the age of twenty and used by friends or of one another by brothers.

<sup>10</sup> *Nan Shih*; Southern History. The *Nan Shih* and the *Pei Shih* (8771, 9893), Northern History, were written by Li Yen-Shou (6884, 13080, 10019) (B. 1232) of the T'ang dynasty (A.D. 618-907). The former consists of 80 volumes covering the period from Sung (10462) to Ch'ên (658) (A.D. 420-589); the latter of 100 volumes covering the period from Wei (12567) to Sui (10394) (A.D. 386-618). (*Tz'ü yüan*?, *Tzü*, p. 391).

<sup>11</sup> *Liang Shu*; Liang Records, records of the Liang dynasty (A.D. 502-57).

<sup>12</sup> Mo Ling; an old name for Nanking.

<sup>13</sup> (a) The Sung emperor Wên ascended the throne in A.D. 424 and adopted Yüan Chia as the title of his reign at that time. The twenty-ninth year of Yüan Chia, therefore, was A.D. 452. The Liang emperor Wu came to the throne in A.D. 502 and Ta T'ung was adopted as title of the reign in A.D. 535. The second year under this title, therefore, was A.D. 536. Ts'ao's dates (A.D. 452-536, literally, *Hsi Yüan*, West beginning) make T'ao only 84 at death according to Western computation. According to Chinese custom, however, T'ao was age 1 at birth, the period in the womb counting as one year of life.

(b) *Ti*; emperor.

<sup>14</sup> Ko Hung (*circa* A.D. 281-361); an outstanding figure in the history of Chinese alchemy. See particularly, Johnson, O. S., *A Study of Chinese Alchemy*, Shanghai, 1928; Forke, A., *Archiv. f. Geschichte d. Philosophie*, 1932, xli, 115-26; Davis, T. L., *J. Chem. Education*, 1934, xi, 517-20; Wu, L. C. and Davis, T. L., *Proc. Am. Acad. Arts and Sciences*, 1935, lxx, 221-84.

<sup>15</sup> Presumbaly while still a child.

<sup>16</sup> *I. e.*, the sun appears to be closer to us when the sky is clear blue and cloudless—a discerning remark for a child to make.

<sup>17</sup> A curious statement, particularly when considered in conjunction with the rest of the quotation. The whole quotation, however, is supported by the findings of Davis and Wu<sup>2</sup> that, 'He was learned in ten thousand volumes but ignorant of the affairs of the world and became very much ashamed of himself on that account. He was very skilful at playing the *Ch'in* (a stringed musical instrument) and at chess, and he wrote beautifully in the classical and in the ordinary handwriting'. At its face value, the first part of the quotation, as given by Ts'ao, reads as though it might have come from one of T'ao's own books. If so, it might be accepted either as a polite and modest disclaimer or, alternatively, as an expression of that realization of relative ignorance which is inseparable from the acquisition of profound knowledge. The tenor of the second sentence of the quotation, however, hardly supports either of these assumptions. Nevertheless, it is difficult to understand how anyone could have accused T'ao either of not knowing a single thing (as in Ts'ao's quotation) or of being ignorant of the affairs of the world (as Davis and Wu have it). Not only did T'ao occupy an official position for a time but, even after T'ao's retirement, the Emperor Wu made repeated efforts to entice him back into officialdom and he consulted him on all important matters of state. In fact, according to Davis and Wu<sup>2</sup> and Giles<sup>4</sup>, he became known as the 'Prime Minister in the Mountain'. That he shunned social duties and once was refused a District Governorship by no means implies a lack of knowledge either in the general or political sense.

<sup>18</sup> *Ch'in*; the Chinese psaltery or lute. According to the *Tz'ü-yüan*<sup>7</sup> (Wu, p. 32) it was made by Fu Hsi (The First Legendary Emperor, (B. 585)). Originally it had five strings; now it has seven. It has a length of 3 feet 6 inches (Chinese). There are 13 stops (*hui*,



5160) so each string has thirteen notes. The sections (*hui*) are inlaid with discs of gold or jade. It is played by laying it horizontally on a table, pressing the strings with one finger and plucking them with another.

<sup>19</sup> *Ch'i*; a term for games played with counters upon boards variously designed, thus, *hsiang* (4287) *ch'i*, the elephant game, chess, and, *wei* (12529) *ch'i*, the surrounding game, the Game of War. (Giles).

<sup>20</sup> *Ts'ao*; 'grass' or running script. *Li*; official script introduced about 200 B.C. and replaced about A.D. 400 by the modern 'clerkly' style. (Giles.)

<sup>21</sup> *Shih*; to attend upon; to wait upon. *Tu*; to read; to study. Hence, *shih tu*, attendant upon the studies of, i.e., tutor. *Wang*; a king, a prince, a ruler, royal. Davis and Wu<sup>2</sup> record T'ao's official position as 'Councillor on Scholarship to the Princes'.

<sup>22</sup> *Tao*; frequently translated as The Way. The central feature of Taoism, an ethical philosophy of life founded by Lao Tzŭ (*B.* 1088 (sixth century B.C.) which later became one of the Three Religions (Confucianism, Buddhism, Taoism) of China. It is not yet clear whether Chinese alchemy arose as one of the many ramifications of Taoism or whether the aims and methods of alchemy merely appealed to the same types of mind that were attracted to Taoism. In any event, alchemy in China was inextricably interwoven with Taoism and some appreciation of the latter is essential to any study of the former.

<sup>23</sup> Tenth year of Yung Ming. The date (A.D. 492) given by Ts'ao agrees with that cited by Davis and Wu<sup>2</sup> and by Kimura<sup>36</sup> for Ta'o's retirement from the court of Ch'i. According to Giles<sup>5, 6</sup>, however, Kao occupied the Southern Ch'i throne from A.D. 479-82 and his reign was known as Chien Yŭan; Yung Ming appears as the title of his son and successor's reign (Ch'i Wu Ti (*B.* 715), A.D. 482-93) adopted in A.D. 483. The tenth year of Yung Ming on this basis remains as A.D. 492, but a curious discrepancy exists regarding the identity of the reigning emperor.

<sup>24</sup> *Sung Shu*; Sung Records, the records of the Sung dynasty (A.D. 420-79).

<sup>25</sup> Yung Yŭan; title of reign adopted in A.D. 499 by Tung-hun Hou (*B.* 711) who came to the Southern Ch'i throne in A.D. 498. It was superseded by Chung Hsing when Ho Ti (*B.* 712) ascended the throne in A.D. 501.

<sup>26</sup> *Shêng*; a hand-organ, consisting of seventeen bamboo pipes with free reeds fixed in the top of a wooden air-chamber which has a mouth-piece at one side. It is shaped like a teapot, through the spout of which the performer sucks in the breath while applying his fingers to the finger-holes. (Giles.) See the paper<sup>2</sup> by Davis and Wu where the *shêng* is shown being played for the delectation of T'ao Hung-Ching.

<sup>27</sup> *Yin-yang*; the Contraries, dark-light, negative-positive, female-male, etc. One of the predominant features of Chinese cosmogony.

<sup>28</sup> *Wu-hsing*; the five things, the five elements (wood, fire, earth, metal, water).

<sup>29</sup> *Fêng-chiao*; an ancient method of divination according to the five sounds made by the winds. (*Ts'ü-yüan*<sup>7</sup>, Hsü, p. 228.)

<sup>30</sup> *Hsing-suan*; star-reckoning, astronomy (or astrology).

<sup>31</sup> *Shan-ch'uan*; mountains and streams, one's country, China.

<sup>32</sup> *Ti-li*; geography.

<sup>33</sup> *Tang-yüan*; squares and circles, geometry.

<sup>34</sup> *Ch'an-wu*; produce of the country.

<sup>35</sup> *I-shu*; methods of (medical) treatment.

<sup>36</sup> *Pen-ts'ao*; roots and plants, frequently rendered as *Materia Medica*. An interesting suggestion of Nakao (Nakao, M., *The Idea of Pên-Ts'ao or Science in the Conception of China* (in Japanese), Oriental Current Idea, Iwanami Series No. 3, Japan, 1934), that the term may have been employed originally to designate alchemy, is mentioned by Kimura in the following quotation from a paper on 'Important Works in the Study of Chinese Medicine' (Kimura, K., *The China Journal*, Shanghai, 1935, xiii, 109-19): 'Pên Ts'ao is commonly understood to be a description of Chinese medicine. However, this term, Dr. Nakao

suggests, first appeared in the literature between 97 and 31 B.C., notwithstanding the fact that Chinese works on medicine already existed before 167 B.C. It is believed that, in the beginning, the term was used to describe an art concerning the prolongation of life, or a science of alchemy. Afterwards, the term came to be used with a still wider meaning that included, not only medicines as used both in medical treatments and for prolonging life, but as connoting victuals both for daily use and for special contingencies.

It may, therefore, be reasonable to regard the *Pên Ts'ao* as a work of biology, or, perhaps, more properly, as something like a work of ancient pharmacognosy or old *Materia Medica* in China.

Wong and Wu (Wong, K. C., and Wu, L. T., *History of Chinese Medicine*, Tientsin, 1932) render the term *Pên Ts'ao* as *The Herbal* (p. 5) and as *Chinese Materia Medica* (p. 77) and Morse (Morse, W. R., *Chinese Medicine*, New York, 1934) as *Herbal of the Chinese Pharmacopoeia* (p. 101). These equivalents refer more particularly to the *Pên Ts'ao* as a book rather than a subject.

<sup>37</sup> Liang Wu Ti reigned from A.D. 502-49.

<sup>38</sup> Translated by Wong and Wu <sup>36</sup> as *Formulas of Famous Physicians*. It was published by order of the emperor and thus may be considered as the first official Chinese pharmacopoeia (Wong and Wu <sup>36</sup>, p. 61).

<sup>39</sup> Shên Nung (B. 1695); the second of the Five Legendary Emperors, founder of Chinese medicine and one of its gods, whose dates are variously given as 2838-2698 B.C. (Giles <sup>5</sup>, <sup>6</sup> and Wong and Wu <sup>36</sup>), as 2767-2687 B.C. (Morse <sup>36</sup>), and as about 2780 B.C. (Kimura <sup>36</sup>). It is alleged that he studied the action of drugs and antidotes by observing the interior of his own stomach. He is also the god of agriculture and of dentistry.

<sup>40</sup> *Shên Nung Pên Ts'ao Ching*; the oldest *Pên Ts'ao*. It is not known when, or by whom, it was compiled. It dates probably from the beginning of the Later Han Dynasty (A.D. 25-221). In the opinion of T'ao Hung-Ching, according to Kimura <sup>36</sup>, the eminent physician Chang Chung Ching (416, 2876, 2143) or the celebrated surgeon Hua T'o (5005, 11358) (B. 830) probably added to it at the end of the second or beginning of the third centuries A.D.

<sup>41</sup> Ch'in dynasty, 255-206 B.C. Han dynasty: Former or Western Han, 206 B.C. to A.D. 25; Later or Eastern Han, A.D. 25-221.

<sup>42</sup> *Pên Ts'ao Kang Mu*; referred to by Wong and Wu <sup>36</sup> as the *Great Herbal*. It is one of the most popular works on Chinese medicine and is still in use as an accepted standard for native Chinese doctors. It took Li 27 years (A.D. 1552-78) to write it, and all preceding works on *Pên Ts'ao* were consulted. Its publication was authorized by the Emperor in A.D. 1595. For a brief description of its contents consult Wong and Wu <sup>36</sup> pp. 78-81).

<sup>43</sup> As with most modern patent medicines, these names have no significance either in translation or in the original.

<sup>44</sup> *Fên liang* (3506, 7010); literally, 0.01 tael plus 1 tael. 1 *liang* (7010)=1 tael of silver=1 oz. (Chinese)=circa 1½ oz. (English); 16 taels=1 lb. (Chinese). Apparently the 'slight excess' was to allow for moisture content.

<sup>45</sup> In the sense of powder to be made into pills.

<sup>46</sup> 1 *tou*=1 peck, containing 10 *shêng* (pints).

<sup>47</sup> It is of interest to note that the nomenclature of red pigments (cinnabar, ochre, red lead) was also very confused in the Greek and Roman periods of Western science. (Partington, J. R., *Origins and Development of Applied Chemistry*, London, 1935, p. 139.)

<sup>48</sup> Literally, lead powder.

<sup>49</sup> Literally, powder tin.

<sup>50</sup> Reminiscent of Pliny's division of 'lead' into two species, *plumbum nigrum* (our lead) and *plumbum candidum* or *album* (our tin). (Pliny, XVI, 47, 156. See Bailey, K. C., *The Elder Pliny's Chapters on Chemical Subjects*, London, 1932, Part II, p. 65.)

<sup>51</sup> *Collection of Authors* [literally, *Assembly-Hall* (or *Park*) of *Scholars*].



<sup>52</sup> *Collected Notes on Hsiao-Ching and Lun-Yü* [the Canon of Filial Piety and the Analects of Confucius].

<sup>53</sup> *Chronology of the Emperors and their Dynasties.*

<sup>54</sup> *Efficacious Prescriptions.*

<sup>55</sup> *One Hundred and One Convenient* [literally, behind the elbow or wrist] *Prescriptions.*

<sup>56</sup> *Collection of Important Maps and Diagrams of Old and New Political Divisions.*

<sup>57</sup> *A Record of Precious Kuei.* As mentioned elsewhere <sup>4</sup>, the term *kuei* is a very general one and in its most simple sense merely signifies a box. Alchemically, the *kuei* apparently was employed as a reaction chamber in which the required chemicals were allowed to react or sometimes it served as an oven in which the reaction chamber containing the chemicals was heated. There appear to have been many different types of *kuei*. It seems best to retain the word untranslated.

<sup>58</sup> *Old and New Methods of Computing the Days of the Week.*

<sup>59</sup> *Methods of Divining the Mixing of Drugs.* . . . The *Tz'ü-yüan* <sup>7</sup> (Wu, p. 135) cites Chu Tzū (2544, 12317) [Chu Hsi (B. 446), A.D. 1130-1200, famous commentator on the Confucian Canon] as authority for the statement that the material for this book was obtained by T'ao from Buddhist sources.

<sup>60</sup> *The Secret of Attaining Immortality.*

<sup>61</sup> *Diagram of the Rank and Duties of the Immortals.*

<sup>62</sup> *Chou's Communication with the World Beyond.*

<sup>63</sup> *Legend of Ts'ao-T'ang, the Buddhist Priest.*

<sup>64</sup> *Comments on Lao Tzū* (see <sup>22</sup>).

<sup>65</sup> *Chên-Jên Wisdom* (see <sup>8</sup>).

<sup>66</sup> *Reflections* (literally, to grasp a mirror). Translation rather doubtful.

<sup>67</sup> *Chief Principles Regarding Drugs.*

<sup>68</sup> *Exhortations of the Immortals.* Mentioned in the *Tz'ü-yüan* <sup>7</sup> (Wu, p. 135) as a book by T'ao.

<sup>69</sup> *Diverse Chemical Processes.*

<sup>70</sup> *Important Notes on T'ai-Ch'ing Tan.* The *T'ai-Ch'ing* is the highest of the Three Taoist Heavens and is reserved for the *hsien* (Immortals). See Giles <sup>5</sup>, no. 2188.

<sup>71</sup> *Limitations and Measures in the Preparation of Tan* [Drugs].

<sup>72</sup> *Methods of Taking Medicines in Solid Form.*

<sup>73</sup> *T'ao Yin-Chü Collection.*

<sup>74</sup> *Important Notes on Good and Poor Drugs for T'ai-Ch'ing Tan* (see <sup>70</sup>).

<sup>75</sup> *A Record of Ancient and Modern Single- and Double-edged Swords.*

## THOMAS CHARNOCK.

By F. SHERWOOD TAYLOR, M.A., Ph.D.

1. *Information concerning Charnock in printed works.*

ELIAS ASHMOLE'S *Theatrum Chemicum Britannicum*<sup>1</sup> has been the chief source of our knowledge of the alchemist, Thomas Charnock. In it are contained the following works of Charnock :

- (1) The Breviary of Naturall Philosophy *Compiled by the unlettered Scholar* Thomas Charnock Student in the most worthy Scyence of *Astronomy and Philosophy*. The first of *January Anno. Dom. 1557 (Th. Ch. 287-303)*.
- (2) *Ænigma ad Alchimiam*. 1572. (*Ibid.* p. 303.)
- (3) *Ænigma de Alchimia (sic)* 1572. (*Ibid.* p. 304.)
- (4) Fragments coppied *From Thomas Charnock's owne handwriting*. (thirteen couplets or short pieces of which the last is dated '1574, the 50 yeare of my age'.) (*Ibid.* p. 424-6.)

Ashmole gives some slight biographical details concerning Charnock in the notes to the *Theatrum Chemicum Britannicum*, pp. 476-8.

That Charnock was born in 1524 appears from the fragment cited as (4) above, but, as we shall see, there exists a copy of a note in his own hand stating that he was born in 1526. Ashmole supposed that, since he calls himself '*Charnock . . . of Tennes that Isle*', he was born in Thanet ; but, as we shall see, he was born at Faversham in Kent. His *Breviary of Naturall Philosophy*, begun on January 1, 1557, and ended on July 20, 1557, affords much lively information as to his early life. As we have seen, Charnock describes himself in the title as 'the unlettered Scholar . . . Student in the most worthy Scyence of Astronomy and Philosophy'. That he was unlettered does not mean that he was illiterate, for much of his handwriting survives ; it presumably implies

<sup>1</sup> *Theatrum Chemicum Britannicum* containing Severall Poeticall Pieces of our Famous *English Philosophers*, who have written the *Hermetique Mysteries* in their owne Ancient Language . . . by Elias Ashmole, Esq., . . . The First Part, London, 1652. (The work will be referred to as *Th. Ch.*) The second part never appeared, but the materials for such a work are to be found in the Ashmolean MSS. preserved in the Bodleian Library.



that he had little formal education, a view that is confirmed by numerous solecisms in his few Latin quotations. No strictly astronomical work of Charnock is known or hinted at, but the Lullian alchemical method, which Charnock apparently followed, seems to have been partly concerned with the cycles of the celestial world.

The chronology of the *Breviary* is somewhat disordered, but from it we gather the following story. Charnock first learned the art from his Master, I.S., a monk of Salisbury, probably before 1552. He was further instructed by the Prior of Bath Abbey, who had the secret at first or second hand, from Ripley, Canon of Bridlington. At the time of the dissolution of the Abbey the Prior had the red tincture in his possession and hid it in a wall, whence it was stolen. He became disordered in mind and wandered about the country, blind and led by a boy; he sought out Charnock when the latter was about 28 (c. 1552) and, after both of them had confessed and received the Holy Sacrament, imparted to him the secret. When Charnock's first master, I.S., died, probably in 1554, he gave his partly completed work to Charnock. But through some mischance his 'tabernacle' (the wooden receptacle for the alchemical vessel) caught fire one New Year's day, probably 1554-5, and all was destroyed. He then started again, but through the carelessness of a servant the work came to nothing. Making yet another effort, he brought the work to within a month of success. But then, when the crow's head was already beginning to appear, the worst of ills befell him, for, to quote the *Breviary* :—

Then a gentleman that ought me great mallice,  
Caused me to be pressed to goe serve at Callys :  
When I saw there was none other boote  
But that I must goe spight of my heart roote ;  
In my fury I tooke a Hatchet in my hand,  
And brake all my work whereas it did stand.

The siege of Calais took place in 1557, and it was in this year that the *Breviary* was composed. That Charnock continued his alchemical work is clear from the shorter poems listed above. It was not until 1574 at least that he attained any degree of success, for from the last fragment we learn

' And whyte shalbe ferment unto the Rede :  
Which I never saw till I had whyte heres upon my head.  
T.C. 1574  
The 50 yeare of my age.

Ashmole's printed notes add little to this. He names the last prior of Bath, Charnock's second master, as William Bird, who had spent much money on the attempt to complete the Abbey Church of Bath. He notes that Charnock must have been a poor man, for otherwise he would not have been pressed as a common soldier,

## 2. Further information concerning Charnock in documents not yet printed.

The above sources of information concerning Charnock are supplemented by:—

- (i) various Ashmolean MSS. <sup>2</sup> (972, 1420, 1441, 1445, 1446, 1452, 1478, 1492).
- (ii) MS. Sloane 2640, which is a copy of a MS. apparently lost, which was extensively annotated in Charnock's own hand.

The Ashmolean documents were evidently known to Anthony à Wood, who gives in his *Athenæ Oxonienses* <sup>3</sup> an excellent account of Charnock's life, correct in most of its details. There is a similar account in Fuller's *Worthies* <sup>4</sup> and the article in the *D.N.B.* draws on these.

## 3. Transcription of documents contained in the Ashmolean MSS.

The most important items in the Ashmolean MSS. are:—

- (i) The correspondence of Andrew Pascal and John Aubrey concerning the finding of a parchment roll (the obverse of which contained original writings of Charnock) and a visit to Charnock's house leading to the discovery of local traditions concerning him.
- (ii) A seventh and last chapter of the *Breviary of Naturall Philosophy*.
- (iii) Numerous notes transcribed by Ashmole or others from books or MSS. formerly in Charnock's possession.

### I. MS. Ashmole 972.

We first transcribe the remarkable series of letters written in the years 1681–4 by Andrew Pascal or Paschal <sup>5</sup>, B.D., to John Aubrey, F.R.S., concerning the finding of a parchment roll containing some writings of Charnock. These letters were transcribed by Ashmole in a printed copy of the *Theatrum Chemicum Britannicum* interleaved with blank paper, on which Ashmole entered the corrections and notes which came to his hand after the publication of the work in 1652. This copy is bound as two volumes which are catalogued as MSS. Ashmole 971, 972. The interleaves are separately paginated. The letters begin on p. 311 recto, and are preceded by a note written by Ashmole.

Since publishing of the work I met with some other Fragments under Charnock's owne hand, whereby I find he was borne at Faversham in Kent and married at Stockeland in Somersetshire and so the Verse in page agst li : 25 <sup>6</sup> may referr only to his dwelling place and not birth place.

<sup>2</sup> W. H. Black, *Catalogue of the MSS. bequeathed unto the University of Oxford by Elias Ashmole*, 1845.

<sup>3</sup> Bliss's ed., iii, 1236–7.

<sup>4</sup> 1811 ed., i, 507.

<sup>5</sup> I have not been able to trace Pascal's history.

<sup>6</sup> *Th. Ch.*, p. 298, l. 25, 'Charnock is his name of Tennet that Isle'.

Extract of a Ltr sent from Mr. Andrew Paschal Batchelor of divinity and Parson of (*left blank*) unto John Aubry Esq. Fellow of the Royall Society : and dated 26th May, 1681.

This day a parchment Roll about 6 f. long, and 9. l. wide was communicated to me by a friend, of which I think it will not displease you if I give you some account. In the inside tis fill'd from one end to the other with Scheames most circular, giving the Chemicall process of making the Elixar, and one Table, the same <sup>7</sup> with what I have seen in Ram : Lully his *Ars Magna*. At the bottom are written these words. Thomas Charnock of Stockland Bristow who travelled all the Realme of England over, for to attain unto the Secrets of this Science, which as God would he did attaine unto A.D. 1555 as it appeareth more planely in the Booke which I dedicated unto Q: Eliz: of England 1566. By this is written

Borne at Faversham in Kent. A.D. 1526 <sup>8</sup>. On the backside of the Roll about a foot from the top is written thus 'At Stockland Bristow 4 miles from Bridgwater 1566. The principall Rules of Naturall Philosophy figuratively set forth to the obteyning of the Philosopher's Stone, collected out of 40 Authors by the unlettered Scholar Thomas Charnock Student in the Science of Astronomy phisick and Naturall Philosophy, the same yeare that he dedicated a Book of this Science to Q.: Eliz: of England wch was A.D. 1566 and the 8 yeare of her reign <sup>9</sup>'.

Then follow the Scheames of Sol and Luna with others of Chemicall Furnaces and Vessells. Then his Posy on the white and red Rose in 6 verses, with Thomas Charnock, subscribed in red letters 1572.

Then the Philosophers dragon described first in 6 verses and a Scheame, and the dragon afterward speakes in 52 verses too long to transcribe <sup>10</sup>.

This was lately found by accident in an old Wall at the place named wch I know, and brought to a friend of mine who is seene in Judiciary Astrology, as supposed to containe misteries belonging to Conjuraton. I feare I shall not make myself Master of this Curiosity, but shall have it in my hands 10 or 12 daies.

Two or three of the inside Scheames at the Top are decayed but all the rest very faire, to the number of 30 or 40. With this was found the ruins of a paper booke in which he had written many old prophesies, such as Englishmen have been alwaies too apt to dote upon, which I suppose he collected in his Travells.

Extract of another Lre from Mr. Pascal to Mr. Aubrey dated 11 June 1681.

The Roll was sometyme since remanded from me, and I heare that the Finder of it (said to be a crafty ——— [*sic*]) having received informacion

<sup>7</sup> Similar, but not identical.

<sup>8</sup> But note that according to the fragment quoted in § 1, he was born in 1524.

<sup>9</sup> See p. 172.

<sup>10</sup> These are given on pp. 154–155 of this paper.



that it was of value, sold it, and that to a person that may deeme it an inestimable Treasure.

There were but 9 quarto leaves of the Prophetes in the Booke I had, one might see 50 had been eaten out by tyme.

I was Tuesday last at Stockland to make enquiry after Mr. Charnock. The oldest men there were strangers to the name, which was gone out of remembrance, but in the Rigisters I found the tyme of his Marriage, the Birth of his Son, who soone died, and the marriage of one, that I suppose must be his daughter, but no mention of his buriall there. There are none of the name of the Families into wch he and his daughter married, but they are remembered vizt. Norden and Thatcher. They were of meane condition, having noe estates of their owne, but lived by renting little Tenements there.

While abroad to enquire after this Master of the Great Secret, I met a plaine Miller, who had laboured about 20 yeares, he lent me the Theatrum Chemicum and also gave me hopes to have from him an ingenious invention of his, to doe the buisines of a Lamp Furnace by a Candle that shall last 24 houres.

On a leaf inset before p. 477 of the printed text is a half-sheet of paper carrying the following queries, presumably from Aubrey to Pascal.

When and by that accident and by whom the Roll was found  
 What day he married Agnes Norden  
 What day his son Absolon was buried?  
 Get a draught of those Emblems in his little  
 Athanor-roome, and on the walls in his chamber  
 search whether any of the powder may be found theare  
 To have some Chart of the inside of the Latin Scrowle.

On page 191 v. there follows a third letter.

A third Letter from Mr. Pascal to Mr. Aubrey the two former being entred after pag: 476.

Sr.

I recd: and retourne thanks for yours. Since my last I got leave to transcribe what Mr. Charnock wrote on the back side of this Roll which I heere send you. I keepe as neere as I could to the very errors of his pen, by which it may in part be seene, that he was as he professeth an unlettered Schollar. The inside of the Roll which is all in Latin, and perhaps is the same with the Scrowle<sup>11</sup> mentioned in Theat. Chem: p. 375, was composed by a great Master in the Hermetick Philosophy, and written by a Master of his pen. Some notes written in voyd spaces of it by Mr. Charnock's hand, shew he did not (at least thoroughly) understand it. But it seems to me, that this Roll was a kinde of vade mecum or Manuall, that the Students in that wisdome, carried about with them. I presume they are drawne out of Raym: Lully, of wch I shall be able to gave fuller satisfaccon, when I have his workes come downe. I was also since my last at

<sup>11</sup> This is not the case. Copies of Ripley's Scroll survive. See John Read, 'Alchemy in Scotland', *Chemist and Druggist*, June 25, 1938.

Mr. Charnocks house in Comage<sup>12</sup>, where the Roll was found, and saw the place where it was hid. I saw a little roome, and contrivance he had for keeping his worke, and found it ingeniously ordered, so as to prevent a like accident to that which befell him New Years day 1555, and this pretty place joyning as a closet to his Chamber was to make a Servant needles, and the work of giving attendance more easy to himself. I have also a little Iron Instrument found there which he made use of about his Fire. I saw on the dore of his little Athanor-room (if I may so call it) drawne by his owne hand, with course colours and worke, but ingeniously, an Embleme of the Worke, at which I gave some guesses, and soe about the walls in his Chamber, I think there was in all 5 panes of his worke, all somewhat differing from each other, some very obscure and almost worne out. They told me that people had been unwilling to dwell in that house, because reputed troublesome, I presume from some traditionall stories, of this person, who was looked on by his Neighbours as no better than a Conjuror. As I was taking Horse to come home from this pleasant entertainment, I see a pretty antient man come forth of the next door. I asked him how long he had lived there, finding that it was the place of his birth, I enquired of him, if he had ever heard anything of that Mr. Charnock. He told me he had heard his Mother (who died about 12 or 14 years since and was 80 years of age at her decease) often speake of him. That he kept a fire in, divers years; that his daughter lived with him, that once he was gon forth, and by her neglect (whome he trusted it with in his absence) the fire went out, and so all his work was lost. The Brasen head was very neere coming to speake, but soe was he disappointed. I suppose the pleasant humoured man (for that he was soe appeares by his Breviary) alluding to Friar Bacon's story did so put off the inquisitiones of his simple neighbours, and thence it is come downe there by tradition till now. Indeeде it appears by the enclosed Papers, that when he wrote the Roll, he had attained but to the white Stone, which is perhaps not halfe the way to the red (put me to my sister Mercury, I will congeale into Silver). And if the old woman's Tale were true, he might afterwards be going on, and be come near to the red, and then the vexing incident might befall him. And this might be, notwithstanding what is said in the fragment referred to the year 1574, for being so near to the red as the traditional story saies he was, he might see in that 50th year of his age that the white was ferment to the red. You may observe my Calculation differs in one thing from Mr. Ashmole's in his Notes upon Theat: Chemi: page 478, for he makes the Press to have beene (out of Stow) 1558 but I (out of Burnet's History) 1557<sup>13</sup>, and consequently he supposes the Press to have been after the finishing of the Breviary, but I presume he set on the Breviary after he was pressed; so indeede himself planly avers in the 4 last lines of that 4 Chap: of his Breviary, Theat. Chem. p. 296. I mention this to give a reason of my dissenting from yr worthy friend, to whom I must intreat you to communicate these Informations that I have had opportunity to gather and also to present my humble service. Sr I thought when

<sup>12</sup> Combwich in Somerset. This village is situated on the west bank of the Parrett, between Bridgwater (5 mi.) and the mouth of the river (3 mi.); Otterhampton (*v. infra*) and Stockland Bristol are adjacent villages. Charnock chose a very isolated district for his habitation.

<sup>13</sup> This date is correct.

I set pen to paper to have given you an account of some conversation with a Person who is a zealous friend and admirer of this sort of knowledge, but I see I have already gon beyond my bounds. I shall only say he hath almost convinced me that it is not so hidden and obscure, so difficult and unaccountable, as men commonly seeme to believe. I have not yet seene my Miller and his invention, though he promised to bring it to me, I presume it is not yet ready, I expect him daily.

Sr: your very affect: and faithfull Servt.

Th. July 19. 1681.

A.P.

A copy of what Mr. Pascal inclose in the aforesaid letter <sup>14</sup>.

Thomas Charnock his Pose  
Upon the White and Red Rose.

XL or black appeare sartayne  
and XX or it wax bright  
And LX after to black agane  
And XX or it be white  
And it <sup>15</sup> or all quick things be dedd  
- - - - - <sup>16</sup> or this Rose be redd.

Thomas Charnock (in red letters)  
1572.

This is the philosophers dragon which eateth up his owne Taile  
Being famished in a dounge of glas and all for my prevail  
Many yeres I kept this dragon in prison Strounge  
Before I could mortiffy him, I thought it lounge  
Yet at the lengthe by Gods grace yff ye beleve my worde  
I vanquished him wythe a fyrie sword.

Then followes the picture of a dragon, with a black stone under his foote,  
with a white stone neere his brest, with a red stone over his head his Tayle  
is turned to his gaping mouth.

The dragon speaketh

- - - - - Souldiers in armour bright  
Should not have kylled me in fyelde in fighte  
Nor Mr. Charnock neither for all his philosophie  
Yff by pryson and famyne he had not famysshed me.  
Gye of Warwyck nor Bevys of Southampton  
Nere slew such a venomous dragon  
Hercules fought with Hidra the Serpent  
And yet he coulde not have his intent  
Salamon the wyse, inclose too in a toome of brasse

<sup>14</sup> This matter was on the obverse of the roll and is not to be found in the fragmentary copy, MS. Sloane 2640.

<sup>15</sup> The word 'it' is probably incorrectly copied and should be a numeral, perhaps ix.

<sup>16</sup> Left blank in the original.



But I was shutt upp in a doungeon off glass.  
 For my lyffe was so quick and my poyson soe stronge  
 That ere he could kill me it was full lounge.  
 Many <sup>17</sup> he hyld me in prison day and night  
 And keapt me from sustenance to mynish me myght  
 But when I saw none other remedy  
 For very hunger I eate myne one bodye  
 And soe by corruption I became black and redd  
 But that precious stone that is in my hedd  
 Wylle be worth a M<sup>o</sup> to him that hath skylle  
 And for that stone's sake he wysely dyd me kyll  
 My death I dyd him forgyve even at the very hower  
 Consydering that he wilbe beneficiall to the poore  
 For when I was alyve I was but strong poyson  
 And unprofitable for few things, in conclusion  
 To that I am now, dying in myne owne blood  
 For now I doe excell all other wordeley good.  
 And a new name is given me of those that be wyse  
 For now I ame named the Elixir of great price.  
 Which yff you will make prouffe, put to me my sister Mercury  
 and I will conjoyle her into Sylver in the twinkling of an eye <sup>18</sup>  
 Virtes and qualites I have many mo  
 Which the folyshe and ingenorant shall never kno.  
 Few Prelates and M<sup>rs</sup> of Art within this Realme  
 Do know a ryht what I do meane  
 My great Grawnfather was killyd by Raunde Lulli Knight of Spayne  
 And my Grawnfather by Syr George Rippley a Chanon of Englande  
 Sartayne  
 And my father by a canon of Lichfield was kyllled truly  
 Who gave him to his man Thomas Daulton <sup>19</sup> when he dyd dye  
 And my mother by Mr. Thomas Norton of Bristow slayn was  
 And each of these were able to make ☺ or D in a glasse  
 And now I am made the greate and riche Elixir also  
 That my Mr shall never lack whether he ride or go  
 But he and all other must have great feare and aye  
 Do secrettly all they can to exchaunge my increase awaye  
 Here Charnock changeth to a better cheere  
 For the sorrow that he hath sufferyd many a yeere  
 Or that he could accomplish the regiment of his fyre  
<sup>20</sup> or he saw his desire  
 Wherefore in thy hart now praise God all way  
 And doe good deedes with it in what soever thou may  
 Therefore thy God gave this Science unto thee  
 To be his Stuard and refresh the poor and neede.

<sup>17</sup> So in original: probably 'years'.

<sup>18</sup> Differs from quotation on p. 153.

<sup>19</sup> Thomas Dalton, alchemist, said to be a priest of Gloucester Abbey, flourished about 1450.

<sup>20</sup> So in original.

The following account <sup>21</sup> was added, being collected by Mr. Pascal out of this sd Roll, this Rigister and Theat : Chemicum.

A. D.

- 1526 Thomas Charnock borne at Faversham in Kent. He travailed all England over to gaine this knowledge.
- 1554 He attained the secret from his Master of Salisbury close, who dying left his worke with him. He lost it by firing his Tabernacle on a new yeares day. About this time being 28 years of age he learned the secret againe of the Prior of Bathe. He began anew with a Servant, and againe by himselfe without a servent. He continued it 9 moneths, was within a moneth of his reckoning, the
- 1557 Crowes had begun to appeare black. He pressed on a warr proclaimed against the French (*Burnet's Hist.* 2, pp. 355) brok and cast all away. Jan. 1 he began, July 20 he ended his Breviary.
- 1562 He married Agnes Norden of Stockland Bristow.
- 1563 He buried Absolon his Son.
- 1566 He dedicated a Booke to Qu. Eliz: 9 yeares after His Breviary was penned.  
He dated the Roll at Stockland.
- 1572 He wrote the Posy on the Roll.  
He wrote his ænigma ad alchimiam and de Alchimia.
- 1573 The Fragmt : . . . . . Knock the Child on the head.
- 1574 He never saw the whit ferment to the end, till he was 50 yeares of age
- 1576 The difficulty of the Philosophers Number on the Roll.
- 1581 Buried at Otterhampton near Stockland, out of his house at Comage, where he kept his work.
- 1587 Bridget Charnock (probably his daughter that kept his house, when his fire was said to give out) married to one Thatcher in in Stockland.

On leaf 194 :—

(This is a draught of what was painted on the little dore of Mr. Charnock's Athanor roome.)

Here appear the drawing shown in fig. 1, and on the reverse a drawing of part of an 'arbor philosophorum' copied from the Roll, and to be found in MS. Sloane 2640.

<sup>21</sup> The Chronology is for the most part accurate. We may add the following. Date of birth may be 1524 (see note 8). His acquaintance with Master I. S. began in Edward VI's reign, before 1552. He tells us that in 1555 he learned this science (p. 172), or attained the secrets of the science (p. 151). It may be that he learned the secret in 1554 and discovered the practice in 1555. In 1562 he was practising surgery (p. 169). He made the annotations on the book *de Phenice* (p. 162) in 1577. In 1579 he first attained perfection in his work (p. 172).

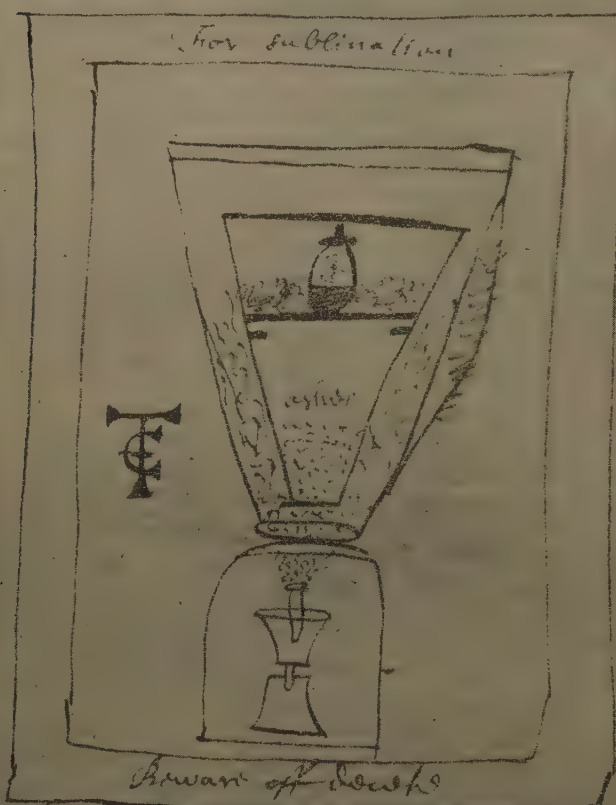
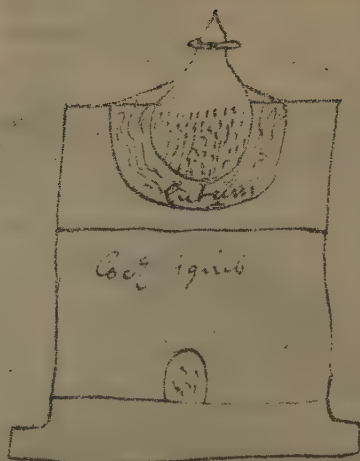
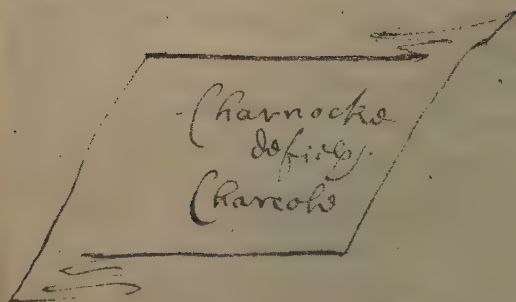
Fig. 1.



Pascal's sketch of the painting on the door of Charnock's Athanor room.



XVI



Residues of defuncts till to wit offend no more  
than will the stand black, blacker than the before.

For by the sublimation I was deceived  
in years together, of T. Charnocke  
by practice. but by Jones by shadow.

Excerpted out of another Lre sent from Mr. Pascal to Mr. Aubrey dated 18th July 1684.

Sr:

Mr. Wells performed his promise. He writes that the House was lately puld downe, and is now built, from the ground; all except the Wall at the East End. Hee could make nothing of what only left over the Chimney. But he found the little dore, that led out of the lodging chamber into the little Athanor roome, of that you have an account in the inclosed draught [Fig. 1]. The two Roses I take to be the white and red, termes common with Charnock for the 2 Magisteries, the 2 Animals over them I suppose are Wolves, denoting the ♂ abunding with volatile ☉ and used to the preparing and purifying one of the principall ingredients into the worke: out of it growing what beares, if those authors may be credited, most precious fruites. I obliged a Painter to goe over soone after I had ben there, and take all he could finde exactly. He was there, but I could never get anything from him, an ingenious man, but egregiously careless. Looking back I finde this note by me June 22. 1681. The place in the Ath: roome, in wch he kept his Lampe was stone worke, about 15 inches deepe, and soe much square, in the cleare from side to side, over it a wooden Collar with a rabbit as to let in a Cover close. No place to come into this Square, but by the Collar, contrived probably after the accident of burning his Tabernacle menconed in his printed pieces: I finde this added, 'twas painted about the Chimney thus. On the left side of the Chimney proceeded from a red stalke streaked with white, first a paire of red branches, then a paire of white, then of red, then one white to the top. Something like a Rabits head painted looking from the Chimney, to the foote of this stalke. The next picture seperated as by a pillar on the Chimney, from one stalk 2 white branches, of either side one, then 2 red above then 2 white then at the top this [here is inserted in the text a figure showing an object like a headstone bearing seven balls arranged six in an elongated hexagon and one in the centre] the Bals of a duskey yellow. The next picture is also distinguished by a pillar on the Chimney to the right side, this quite obscured by Smoak. In the last corner of the Roome an other Picture described with double branches, first white, then red, then white. The one on the top red. This is all I can say of that place, of which I wish I were capable of sending a better account. The other side of Mr. Wells paper gives you one of the Scheames in the middle of this Roll, which is now by me. The transcription of the thing, said to be Ripley's, should cost Mr. Ashmole nothing, were I not under an obligation not to impart it to any. It may be greatly to his loss who did communicate it to me, if the owner should know I have it, if I can contrive a way to send it with leave, I shal be ambitious to gratify that worthy person.

#### Ashmole notes.

I perceive by some other passages in this Lre. that Mr. Wells above menconed, began to write something of Somersetshire 1673 in imitation of Sr. W. Dugdales Warwickshire but he left of: yet very zealous in assisting others, he hath a collection of Arms, as large as a Church Bible.

The MS. also contains Ashmole's annotations upon the works of Charnock and the notes upon him printed in the *Theatrum Chemicum Britannicum*. Textual corrections are here omitted, but the following are worthy of note Leaf 197. Note upon p. 296, l. 12, against the words Master I. S. is entered :

l. xii. ' John Sauler <sup>22</sup>, a Monke of Salisbury '.

Leaf 310 v. opp. page 475. Against the note on p. 296, l. 23, in which the printed text gives the name of Charnock's second master as William Bird (prior of Bath at the Dissolution of that Abbey), Ashmole writes :

Godwin calls him Bird <sup>23</sup>; but Leland, Gibbs. vide Lelandi Itinerar.

vol. 2. p. 38.

Leaf 311. v. opp. p. 476, against the note about the Prior's loss of the red stone which he had hidden in the walls, Ashmole writes :

' Shortly after the dissolucon of Bath Abbey, upon the pulling downe some of the Walls, there was a Glasse fond in a Wall full of Red Tincture, which being flung away to a dunghill, forthwith it coloured it, exceeding red. This dunghill (or Rubish) was after fetched away by Boate by Bathwicke men, and layd in Bathwicke field, and in the places where it was spread, for a long tyme after, the Corne grew wonderfully ranke, thick, and high : insomuch as it was there look'd upon as a wonder. This Belcher and Foster (2 Shoormakers of Bath, who dyed about 20 yeares since) can very well remember ; as also one called Old Anthony, a Butcher who dyed about 12 yeares since.

This Relacon I recd : from Mr. Rich : Wakeman Towne Clearke of Bath ; (who hath often heerd the said Old Anthony tell this story) in Michaelmas Tearme 1651.'

## II. MS. Ashmole 1420.

On page 70 appears a copy of Charnock's *True Similitudae* agreeing with the copy in Charnock's hand (v. inf. p. 161).

<sup>22</sup> There was no monastery at Salisbury, which makes it difficult to trace Sauler.

<sup>23</sup> Prior Byrd died in 1525 and the person in question must be Gibbs. Dugdale's *Monasticon Anglicanum*, 1819, ii, p. 271, states that William Holway or Holleweye, alias Gibbs, was elected prior July 5, 1525, and applied himself to the completion of the abbey church. It was scarcely finished when, with about 14 or 15 monks, he subscribed to the King's Supremacy, 22 Sep., 1534. He surrendered the monastery to the crown Jan. 27, 1525. Book of Pensions, Augmentation Office, for year 1539, gives lxxxli: "First to Willm Holway pror for his yerely in mone . . .

A second list, as above.

William Gybbes als Holeway, prior . . . lxxxli.

Abbot Ethelbert Horne, to whose kindness I owe the above note, informs me that he has not found any reference, other than Charnock's, to the practice of Alchemy by Holeway.



## III. MS. Ashmole 1441.

This MS. contains several fragments : p. 85. In Charnock's own hand :  
Table of numbers and letters.

T.C.			
1	A	41	
2	B	20	
3	C	41	
4	D	20	
5	E	60	
6	ff	20	
7	G	46	
8	H	21	
9	I	40	
10	K	20	
11	L	46	
12	M	20	400 past
13	N	60	460 past
14	O	40	500 480
15	P	20	520 506
16	Q	20	520

Above : Off all these circulations, so god me mende  
I know not perfettly, where to ende.

At the right side horizontally : Dies pro heptomida (see note 48).

At the right side vertically : All these I have truly passed.

## p. 86. A note in Charnock's hand.

Note my son Thomas Charnock after my days : that when with t[r]ew practis great charges and lounge and tedious travell, I had accomplysshed the number of 476. yet found I nothing to my expectacion : wherefore I determyned my selff by the assistance off God to proceed farther as to the number off 480. 490. and 520. Hoping in the Lyving Lorde that at the end off one off these .3. numbers to make an ende : to my great comfort and to the glorye off God, and refresshing of the poore which shall ask it in his name.

Which God graunt me. Amen.

In a smaller hand.

but all these numbers were nothing in effect as to the accomplyssing off the worke.

## p. 87. In Charnock's own hand.

Charnocke his trewe similitude.

Knowe ye well that when fire, ayre and water are departed from the earth, then the body remayneth ded, black and stinking, and is by reason so called : terra nigra, fetida et spongiosa for that as it he is nothing worth :// Knowe ye therefore the pueriste and the hiest element that our god made is the fyre. And therefore it is I set in the hiest phere next to the hevens by

which ellament every earthly creature shalbe purified before the day off doume or he shall receive his spirit agane then shall that coruptable body be chaunged into a glorious bodie bright and shining and shall remayne dere and pretious in the lords sight ever world without end: // Even so shall that earth wch was so black through corrupption, be purified by lavigation off the ayre and purging off the fire and so receve an immaculate bodie bright and shining as the Sson.

p. 100. Copies of some of the fragments, later printed in the *Th. Ch.*, pp. 424-6. Also a note: 'CCC. C score ad album/CCCCCLX ad rubeum'. In the margin are some calculations.

p. 101. Fragments printed in *Th. Ch.*, pp. 424-6, and also: Sketch of a Phoenix standing on its burning nest and illuminated by a ray of the sun. Beneath:

'There is in ☿ whatsoever the wise man doth seeke, whatsoever the poore man doth seeke, whatsoever the sick man doth seek, for I know the wise man seeketh for wisdom, the rich man for more riches, the poor man seeketh to amend his estate, and the sick and diseased man seeketh for his health, and all this is in our ☿. But not in the common crude ☿ which is digged out of the mynes and is to be bought in the potticari his shopp, for he is contrary to this nature, for off a wisse man he maketh unwise, off a rych man a poore man, off a poore man a beggar, and to a sick man he is a perfect death, iff he take him inwardly for medicen.

q. Thomas Charnock 1577.

Written upon the frontispiece of lib De Lapide philoco de Phenice <sup>24</sup>.

There follow some of the fragments printed in *Th. Ch.*, pp. 424-6.

p. 102. Fragments printed in *Th. Ch.*, pp. 424-6, and also:—

'over agt 11th verse of liber de Phenice vizt me predatu etc. Charnock hath margined thus—8th Black 461

over agt the bottome of the 21 verse

thus — 180. for putrification <sup>25</sup>.

over agt the 25 verse <sup>26</sup> thus

— 461 the 8th black  
at 156 floragitur  
at 36 peragitur

---

653 <sup>27</sup>.

<sup>24</sup> The work referred to is the *Cantilena Georgii Riplexi, De Lapide philosophorum seu de Phenice* (this vol., pp. 177-181). The copy of this in MS. Ashmole 1445, VIII, 1-12 bears the annotations given below in Charnock's hand, but lacks any frontispiece.

<sup>25</sup> Against the English translation of 11th verse, the Latin of which begins, 'Me praedatum' Charnock has written, '8th Blacke 461'. Against the 20th he has written, '180 In putrifaction'.

<sup>26</sup> Against the 21st Charnock has written, 'tempus perfectionis secundum istum'.

<sup>27</sup> Written against 24th and 25th verses.

Sibill's number <sup>28</sup>

bis centum et octies et ter tribus decadibus  
atque novies et octies decem.

476

7 tymes assending upp and downe within a fount  
now darke now clere off light :// Dausten <sup>29</sup>.  
Principium nostri operis est dissolutio lapides  
nigred (*sic*)

Ripley makes a fayer shoue  
How coulers wyll ryse a reowe

p. 103

Pale black, with false citrine, imperfect white and red  
the Peykokes fethers in coulers gaye, the rainbow will over grow  
The spotted Panther with the lyon greene the crowses bill bloo as led  
These shall appere after the white and other moe  
coulers. and after perfect white grey and false citrine allso  
and after all the Colours, then shall  
appere the body never variable  
then Ripply meaneth he is multiplicable <sup>30</sup>.

Here follow three fragments printed *Th. Ch.*, p. 426, and then :

Quia per modicum tempus ante albedinem  
color pavonis mirabiliter apparebit } Plinii.  
Apparet alia ante albedinem color pavonis <sup>31</sup>  
q. Roger Bachon.

Memorandum that Syr Robarte which did confer with  
my tutor Syr James in King Edwardes dayes dwelleth  
now at the Savoye in London and hath it a workeing  
there Harrye Hamond told me at Sainte James fayer <sup>32</sup>.

Ano domi. 1566.//==//

There follows the fragment printed last on p. 426 *Th. Ch.*

p. 104. Enigma ad Alchimiam <sup>33</sup>. Printed *Th. Ch.*, p. 303, then :

At the length and last of all we shall finde the bodie blacke  
and darke in the bottome of the glasse./  
Which is called a dedd bodie, ferment, the  
shadow off the sonne, darke clowdes, the tayle of  
the dragone which off the dragone is now eaten ://

<sup>28</sup> See note on roll, p. 176.

<sup>29</sup> Contained in Dastin's Dream, Stanza 41 (*Th. Ch.*, 257 ff.).

<sup>30</sup> Altered version of a verse from Ripley's Recapitulation (*Th. Ch.*, p. 188).

<sup>31</sup> Rogeri Bachonis. Speculum Alchimie. *Theatrum Chemicum*. Argentorati 1613.  
ii, p. 416.

<sup>32</sup> *Th. Ch.*, p. 477. Ashmole notes that Master I.S. was John Sauler: here Charnock calls him Sir James. Is it possible that this is a slip, his mind harking forward to 'Sainte James fayer'?

<sup>33</sup> *Alchimia* corrected to *alchimiam*.



## IV. MS. Ashmole 1445.

In this MS. are contained a number of items of interest to students of Charnocke, chief of which is a copy of a seventh and last chapter of the *Breviary of Naturall Philosophy* which must have been added after the MS. used by Ashmole <sup>34</sup> had been compiled. It consists of 7 pages (VIII. 29-32) in a clear writing, believed to be that of Sir George Wharton <sup>35</sup>.

On pp. viii. 29-32.

## THOMAS CHARNOCKE. BREVIARY.

## The Seaventh and Last Chapter.

- I cannot refraine my pen any while,  
 But that to your Mastership <sup>36</sup> I must write some stile ;  
 But prose, or Meter, or verses to make,  
 My witts doe not serve such thinges to undertake.
- 5 Yet I will take on me as well as some men  
 My witts to awake, to scrape with my pen.  
 Yet better unwritt, then differ from ryme.  
 And as good nothing said as spoke out of time.  
 Yet to you my pen I will now revert,
- 10 Desiring your Mastership to take in good part.  
 This my blockish inditeing, accepting my good will,  
 For that my rude Meter doth sound very ill ;  
 And worse doth accord my reason I say,  
 For that I lack matter to bring it in good stay.
- 15 Nor this hath not been my practise many yeares,  
 To pick out goode fruit from thornie briers.  
 And at one Science you know whole yeares have I sitt,  
 Which now I'll refuse, for it passed my witt.  
 Yea many a fine witt that Science hath deceiv'd,
- 20 So much the lesse my studie hath me greev'd ;  
 For that some have practis'd it as well as I,  
 Whose witts are not equall to my follie,  
 Which thought themselves as sure as hawk on fist,  
 And by that Science to have done what they list :
- 25 As in building, repaying and helping the poore,  
 Princely to reare both Castle and Tower ;  
 But when they seem'd this Science to have wonne  
 Then were they as neare as when they begunne.  
 For of this Science they were never the nier,
- 30 But their labour for their travell in blowing the fire.  
 So that those which have been wealthy I wot,  
 Now for their owne ease cannot spend a groat :  
 Such is the profite that this science doth bring,  
 That who so follow it, much poverty shall they winne.

<sup>34</sup> Only the last 12 lines of this MS. survives (MS. Ashmole, 1441, p. 99).

<sup>35</sup> D.N.B. *Sub. nom.*, Wharton, George.

<sup>36</sup> The prior of Bath ; Master I.S. was dead before these events occurred,

- 35 Without they the Philosophers well understand  
I wish they doe not take this Science in hand :  
For truely I have talk't with many a learned one.  
And they were as neere as I am now to Rome ;  
Yet of their Mastrie they make themselves so nice,
- 40 That every word they speake they thinke it of great price  
I meane they will not talke of their Philosophy,  
If they know in their company any of that studdie ;  
As I shall declare your Mastership anone,  
How I met with two Philosophers in Calais towne.
- 45 The cause you know why that thither I far'd <sup>37</sup>,  
Now there I found a kinsman of Queene Maries guard,  
Whom glad I was to see, and hee me againe,  
But what Joy was made betwixt us twaine  
At our meeting, I leave out for this time ;
- 50 And to the best Inne wee went to drink wine,  
And there for to lodge, and to make good cheare,  
For wee had not seene each other in many a yeare.  
Wee had our chamber appointed anone,  
There for to supp most quietly alone :
- 55 But so it chanced ere the cloth were laid  
In came our host, and to my kinsman said,  
Mr. Charnock, pleaseth you to understand,  
That here be two yeomen come from England  
Who would be glad to have your company :
- 60 My kinsman said with countenance merrily,  
I pray you mine host let them come nier,  
Good fellows fellowshipp is greatly my desire.  
And when they were come I thought them lusty Greekes,  
That passe not how the world went by daies or by weekes ;
- 65 And at the boord they sate them downe with good availe  
In their hatts were more feathers then in a Peacocks taile :  
They smelled rammishley whatsoever they were.  
Of oiles, salts, and sulphurs and other mad geere.  
Then said my kinsman with a bold speech,
- 70 I think th'one of you a Poticary, the other a Leech :  
We are none of them Sr whome you doe name,  
But wee are two Philosophers, if you understand the same.  
What no by Gods Mother said my kinsman thoo,  
If I understand no better to handle my bow,
- 75 Then I can construe what you are by your Art,  
I might spend all my arrowes ere I hitt the mark.  
But I pray you what ware have you there in your sachell ?  
Sir, we have Sulphur and Mercury the tincture to all metall,  
With all the 7 salts which to our Science must goe,
- 80 With oiles and corrosives, which the ignorant doe not know  
Peace, said his fellow, you are much to blame,  
Speake Philosophically and talk on Gods name :  
You ought not thus rustically to use your speech,  
Whereby you will every man our Science teach.

<sup>37</sup> *Breviary of Naturall Philosophy.* Chs. IV and VI,

- 85 So at their supper no more wordes did they spend,  
 But with sober talke, and that I much commend,  
 Untill after supper that wine waxed plenty,  
 Then they began to talke of Philosophy :  
 Ne had not their tongues sounded much upon mault,  
 90 I would that night gladly with them have talk't.  
 Wherefore their Science I made it Hebrew to me,  
 And who is so blind as he that will not see ?  
 And in Calcination they were very thick,  
 And in Dissolution they were as quick.  
 95 And in Elementall Separation they were not to seeke  
 So that all their reasons were well worth a Leeke.  
 Then to Conjunction their matter they had brought,  
 And as for Putrifaction they thought it nought.  
 But in Coagulation they had such a trust,  
 100 That for lack of Imbibition they thought he should not thirst  
 And that Sublimation should doe th' Elixir as much good  
 As well as Fermentation, this they understood,  
 Until they had brought him to his Exaltation  
 Then they began a new Reiteration.  
 105 And thus in a truckle bed they talked houres three,  
 And we in the higher bed lay just them bye,  
 And heard their folly and also their boast,  
 How to have this Science they would spare no cost.  
 For if they had this Medecine within a quarter,  
 100 They would live as Princes all their lives after :  
 And home they would to Winchester Citie  
 Where they were borne, and do workes of pitty,  
 And also re-edify the Walls and Castle, they saies,  
 And make it beautiful as in King Arthurs daies : <sup>38</sup>  
 115 And bring again the old River from Southampton,  
 That lighters and boates may goe and come  
 With any kinde of merchandise, fewell, or ware,  
 And of all these charges for gold they had no care  
 And then a Market crosse in that Citie they would up set,  
 120 The patterne whereof in Cheapside should be fett <sup>39</sup>,

<sup>38</sup> Mr. F. W. C. Pepper, City Librarian of Winchester, has kindly furnished me with information concerning Winchester in the sixteenth century. The city was then in very poor circumstances and appeals were frequently made to the King for financial assistance to 're-edify the Walls and Castle', which were in a very dilapidated state. To 'bring again the old River from Southampton' refers to the River Itchen, which had for centuries been navigable from Winchester to Southampton, and on which a considerable trade had been done between the two towns by means of barges. This had fallen into disuse through neglect and there were frequent appeals for its restoration. Winchester had a market cross, erected in the fifteenth century, so the alchemists were evidently planning one rather to commemorate themselves, than to assist their city. There are records of a Winchester Alchemist of about this period (v. Some account of John Claptone, an Alchemist of Winchester, temp. Henry VIII. J. O. Halliwell. *Trans. Brit. Arch. Assoc.* 1845).

<sup>39</sup> *Londina Illustrata*. R. Wilkinson, 1819, p. 125-33. There have been three Cheapside crosses; that which was in existence in the sixteenth century was ornamented with many statues. It was newly gilt for Edward VI's Coronation.



- Wherein their Images should stand both together,  
 Well gilded with gold, a memoriall for ever.  
 And thus I heard their folly in my bed,  
 Untill a dead sleepe tooke me in the head.
- 125 But in the morning at the day breaking  
 Then I spake unto my kinsman saying,  
 All with a loud voyce I began to tell  
 Because those Philosophers should heare me well :  
 O Lord cozen ! what two cunning men be here,
- 130 In faith I thinke you never heard their peere  
 How they in the Mother tounge did talke yesternight,  
 And yet wee never [heard] a word conceived aright.  
 Then said my kinsman, so God that made me,  
 I thinke better clerkes can never none be.
- 135 No, quoth I, they are two of Gebers cookes, the truth to tell,  
 And not so wise in bookes, I know them by their smell.  
 They told you last night what they had in their pack,  
 Good stuffe I warrant you to heale a gald horse back :  
 And if it be otherwise good, I marvell wherefore ?
- 140 Without your oiles might happen to supple an old soare  
 Then one of them spake to me and that very snappishly,  
 And said, Sr, you speake of what passeth your capacity :  
 And why should you find fault with that wee did say ?  
 Seing of our talke you could not beare a word away.
- 145 I would not have gentlemens touns to rove at large,  
 But to meddle with matters pertayning to their Charge ;  
 And to talke of such thinges as to them appertaine,  
 And not to despise that will ne're enter their braine.  
 In faith you say troth good Master Philosopher,
- 150 Your Science will soone help to empty your coffer ;  
 If that you apply well your imbibition,  
 No doubt you will bring it to good perfection.  
 You are learned men indeed where fooles be in place,  
 I pray you how long have yee runne in this race ?
- 155 That among the Philosophers yee would be in number :  
 Let never Philosophy your witts over cumber,  
 For he that knoweth not the substance of the thing,  
 Shall never finde of his worke the ending.  
 Put no flies nor butterflies in your works, Philosophers say,
- 160 It is a work of women, and of children a play.  
 How say you now to your Sulphur and your Mercury ?  
 Thinke you they will make Conjunction in your stillatory ?  
 No without you had brought in your bagg the Man in the Moone,  
 Your work without him cannot be perfectly done.
- 165 Hold your peace quoth they, and speake no more.  
 For you are one of our Science, which wee knew not before,  
 But we much marvell, that one of your age,  
 Should so well understand Philosophers knowledge :  
 For we have studdied this Science three yeares a peece,
- 170 But can we not get thereof but a fleece.  
 Nay if you have a fleece, yee are well for your part,

- For ten years together have I studied that Art,  
 And seaven years more have I practis'd the same <sup>40</sup>.  
 Yet in all this time it would not with me frame.  
 175 Yet I wish you to note what I say to you here,  
 I promise you truely you have a wrong sow by the eare,  
 I mean towards this science, for ought I can see,  
 You go as right as my legg at the knee  
 Then one of them spake to me very curteously,  
 180 And said, Sr, I pray you let's have your company  
 While you are in the Towne, and wee will beare your cost  
 Be it never so good cheare, wee will pay for the roast.  
 And teach us the substance of the matter if you would,  
 Wee will give you a Portegue of good gold.  
 185 I refused their gift and thanked them for their proffer  
 Yet plenty of coine they had in their cofer : <sup>41</sup>  
 But within three moneths and more over a weeke  
 They had as many faces as pertaines to a sheepe.  
 So thus by their saucie boldnes they were undone.  
 190 For they had over congealed both Moone and Sunne  
 And brought their Elixir to such an Exaltation  
 That unto their purse it was worth a purgation.  
 Taken in an evill aspect, as in the taile of the dragon,  
 The moone being carried in the beames of ill fortune  
 195 Yet a restorative they found at the length,  
 To set their purse againe in his full strength ;  
 For one of them had sold, as I did understand,  
 Ten pound a yeare of good arrable land :  
 And so began they their work agane,  
 200 And thought suerly they should it obtaine,  
 For they had wrought it like a crystall stone,  
 Well coagulated and faire to looke upon.  
 Then were they as merry as tap and canne,  
 And sent for me that I should come than  
 205 To see the Philosophers white stone, wch they had wrought  
 I promise you truely it was worth right nought  
 As I proved to their faces ere that I went ;  
 And then they began themselves to repent,  
 And said they had spent a hundred mark and more,  
 210 Yea said I then, I told you this before,  
 So cursed they the Science and said it was not true  
 But what became of them after, I knew not, for I bid them adieu.  
 But of anything that I could heare, by word or by letter  
 Winchester Citie for their Philosophy was ne're the better.

## FINIS.

<sup>40</sup> If we assume that the seven years were not to be included in the ten, we must suppose that Charnock began to 'travell all England over to gaine this knowledge' in 1540, and that he began the practice in 1550. It would seem more likely that the ten includes the seven and that he began to travel in 1547 when he was 21 or 23, according to the birth-date adopted.

<sup>41</sup> The text has 'focer', evidently a slip for 'cofer'.

There follow some notes evidently copied from a book or MS. which had been used by Charnock.

Page VIII. 33 r. contains a copy of 'Charnock his true similitude' identical, save in spelling, with the autograph copy in MS. Ashmole 1441 (*v. supra*); and also :

De temporibus. of 7 — circulation

Quod quinque in 7 tem :// quinque in 9 tem :// quinque in duodenis completur vicibus //==// Aliter ://==//

By this I gather xii sublimacons in the subtill work or ever he be perfectly accomplished

Quod quinque in 4<sup>on</sup>. quinque in 7<sup>tem</sup>. que est ultimum completum vicibus / This I understand from putrifaccon unto this perfeccion.

And 40 weeks to come ://: And 36 weeks to come ://

All mettalls be they never so small I fyled, yet the least part conteyneth the hole within himselfe off his hard compact body and they shall never increase nor multiply, till they be reduced into  $\phi$ . et w :// as in my other bookes I have made discripcon and this is perfect philosophy.

Thomas Charnocke

Under a Recipe that gave this tytyle

A proper matter—he wrote under  
and good for a pewter platter  
quoth T.C.

That Charnock practised Chirurgery appeared by this note :

I take Richard Deane for healing off his legge  
V marke. 20s in hand, a mark against  
Christmass and the V nobles at Easter  
John Boden surtie.// and Wylliam Lawly Surtie.  
In the beginning of the booke was written  
Thomas Charnock his booke 1562.

Page 34 recto is reproduced in fig. 2. No explanation is given, but the lower drawing seems to be that of a lamp-furnace such as was found in Charnock's house. The inscriptions are :

<i>Top left :</i>	Charnock desireth Charcole <sup>42</sup>
<i>Top right :</i>	Lutum. Locus ignis.
<i>Below :</i>	<i>In margin above.</i> For sublimation
	<i>In bottle.</i> Lapis
	<i>Below bottle.</i> ashes
	<i>Lower margin.</i> Beware off decete
	<i>Beneath.</i> For by this Sublimacon I was deceved iii yeares together by practise but vii yeares by studie. q. T. Charnock
<i>At side :</i>	Ascendens et descendens till he will ascend no more Then will he stand black, blacker than ever before.

<sup>42</sup> Cf. *Th. Ch.*, p. 295, where Charnock complains of the expense of firing.



## Page 34 v.

Severall notes of Charnock's owne handwriting.  
 For yff you dyd know what tyme and space  
 the worke would axe before it be accomplished  
 and the Elements perfectly shut up and  
 rectified you would not marvell whye sso many  
 unwise and unstable witted men do finish by their  
 short conclusions this science unsartaine.

Charnock 1572.

Note the sayings  
 of T : Charnocke.

Nota bene q. T. Charnocke.

Lapis a uno descriptus vobiscum, est permanens  
 terraue maris quod nullo modo fugatur :// factum  
 ferrum est aurum nostrum :// est, tinctura nostra est  
 et unum ornamenta natura :// stagnum est argentum  
 nostrum :// nigredo est dealbatio nostra :// et albedo  
 est ruber noster :// Dies purgationes super  
 ipsum reiteramus quousque facile dederit fusionem ut  
 cera :// hinc enim perficimus et habundancius operabitur.

Cum autem terra commiscitur cum aqua :// terra obsorbet  
 aquam suam ex sua siccitati et inspissat eam et facit  
 eam sibi simile suo grossitate ://

Sarten verses off the Stone.

First he will not consume in the fire  
 Second he will soone dissolve in the flame  
 Wch as I take he will soone melt with meane heat  
 Thyrdly he will soon conjayle <sup>43</sup> in the ayre.  
 4 fourth one parte will convert 2 partes of ☿ into  
 pure sylver with in an hower.

## Page 35 r.

In a large proces of the water of Celydonia Vite [       ]  
 over against these words (And any lyme be laskyd  
 hyt wol restore hym ayen) Charnock writes  
 this in the Margent <sup>44</sup>.

T.C.

Remember  
 my ruppture



Black white and red  
 Be coullores all three  
 Which at last did appere  
 In short space unto me

<sup>43</sup> 'Congeale' written above in a different hand.

<sup>44</sup> The annotation is to be found in MS. Ashmole 1452, p. 85v (v. infra).

For Black did first rule the rost  
 Till white came and cler'd the Coast  
 But then came one of much might  
 Wch made Black and White fle quite  
 Me thought he was a man off honor  
 For he was all in Golden Armour  
 And on his head a Crowne of Gold  
 Wch for no riches it would be sold  
 Written at the end of a Blanch.

The devell hath no power to hurte  
 the Earth, or to tempt or hurte man,  
 but by the permission and sufferance off God :

Yo<sup>r</sup> father Thomas Charnocke.

Pages 36 r. and 36 v.

This leaf has been inserted, for leaf 35 bears the old number XVI and leaf 37 bears the old number XVII. The matter on this leaf does not seem to be Charnock's.

Page 37 r.

Other noates collected fro Tho. Charnock's owne hand writing.

1563

' Thomas Charnocke his Booke, Practiser in Philosophy, borne at Faversham in Kent and married in Stockeland in Somersetshire by me learning and fortune '.

---

30 yeares trewely <sup>45</sup> I practysed this science  
 And I was never the rycher by too pence.  
 But rather an hundred marke the worse  
 Yet hereafter I trust to fyll my pursse  
 And healp my sellffe and the poore at neede  
 For sso gods words does me leade —  
 And who sso to lyve a godly lyff doth indevouer  
 God gyveth him this Science for his Succoure  
 quoth Charnocke

---

Here you maye playnly understande that the  
 viith Sublimacon lasteth 60 W .∴ that is 40 to black  
 And from thence 20 to whyte./  
 Note that the last conjunction is invisible to mans sight,  
 And thereto doth agre Mr. Norton and Lawrentius Ventura<sup>46</sup>,  
 And my greate book off chimy in his recapitulacon./

<sup>45</sup> The date of this note is uncertain, but since Charnock attained success in 1579 it is probably earlier than this, and indicates that he began in 1549 or earlier, which agrees well enough with the chronology of note 21.

<sup>46</sup> Laurentii Venturæ Artium et Medicinæ D. De ratione conficiendi Lapidis philosophici Liber. *Theatrum Chemicum*. Argentorati 1613. Vol. II, p. 230. The passage referred to may be that on p. 316: Et in hac conjunctione spiritus, animæ et corporis, sola divina potentia operatur in mente, et regimine artificis.

## Page 37 v.

At the number off 561 : there apperyd a lyttell  
 star bright and shining whitter than the snowe  
 Wch never apperyd to my syghte before  
 thomas charnocke maior

Also at 600 at bothe ends there appeyred 3  
 or 4 off greatter bygnes then before.  
 As whyte as snow

600 past

Also at 604 there began to apper many moe.  
 At 600 and 10 there apperid a 5 or 6 small  
 White pearles copped and round.  
 But before they wer flat but now round wch  
 I never saw before that day

Here follow one or two notes and drawings the significance of which is obscure.

## Page 38 r.

In the yere off our Lorde god 1566. I dyd dedicate  
 a booke off philosophie to Queen Elizabeth and  
 delyvered him to hir cheiffe Secrettarie named secretarye  
 Sicyll:/ but be cause the Quene and hir counsell had  
 set goone a work in Somerset place in London before I  
 came and had wrought there by the space off one yere  
 therefore my booke was layde a syde ffor a tyme://  
 and was put in the Queenes librarie <sup>47</sup>:// and in this  
 Booke I dyd write that uppon payne off losing off my  
 hedd that I wold do the thinge that all this realm  
 should not do agayne.//

quoth

Thomas Charnock

1555. I learned this science. 1579 or I coulde  
 se ayne perfection off my worke //  
 three tymes I fayled by practis //  
 and threescore tymes I fayled off my number  
 Nere the end of a Tract, ending thus. Explicit  
 Practica M<sup>ri</sup> Ramundi Lulii Occulti Secreti quæ est  
 ffinis totius investigationis cujusdam honoratus  
 compendii sui.

Charnock writes this

40 black	{	Here Raymund speketh trulye as I judge as 20 days to white, dies pro hebdomida, and 30 after to redd.
20 whyte		
30 red		

<sup>47</sup> This library ultimately came to the British Museum but Charnock's book is not there.



Page 38 v.

Nubes

Opus nubium

Nubis congelata.

Note that I, T.C. : did see clowdes openinge and  
 overpassing my work in his XIth circulation and after  
 times those clowdes being vanished and over blowne  
 others dyd arise after then when I had accomplysshed  
 the number and knew not then the perfetynne, but was  
 yet in a good hope that the worke wolde ask but XII  
 circulations which wyl be accomplyshed at the number  
 of CCCC wch God grant that I may once see the  
 perfeccon and ende

Yet I proceeded to the numb[er] of 455

And by this number yet I could not thryve

I meane to the accomplishing off the philoso : stone  
 and then I hoped will in 461

but it fell to nothing

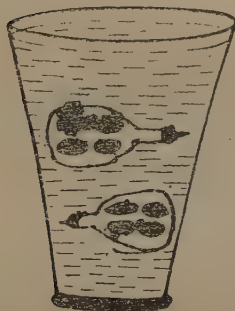
14 Circulacon 461

15 Circulacon 506 according to Ra's roll

16 Circulacon 520 the seige off Troy <sup>48</sup>.

Page 39 r.

Fig. 3.



506 doth our elements fixe  
 but I desier God that

500 : 60 : and 7

may perfectly fynyshe  
 the philosophers heaven  
 q. Thomas Charnock.

A man gyven to great solitarines  
 Having the secret off the science  
 By pacience in tyme full lounge  
 He maye accomplysshe this precious stone

} 566 past

He that hapneth on thys my booke after my dayes maye perseve by  
 the soundry notes wch I have made, how with lounge and teadious practis  
 to my greate charges : I proceeded to the accomplysshing of the quinte  
 essence : and ever was put off by longer tyme, and from tyme to tyme :

<sup>48</sup> 520 weeks=ten years, the length of the siege of Troy.

but now I hope that I am within 40 weekes reckonings wch god grant once to fulfyll. Amen.

**tempus**

466 past

all these tymes dyd  
nothing to the accom-  
plishing off the worke

490 vel 520

V. *MS. Ashmole 1446*, p. 117, contains an MS. which formerly belonged to Charnock.

VI. *MS. Ashmole 1452*, contains on pp. 75–91 four short treatises which were in the possession of Charnock. At the beginning is written in another hand, 'Charnock's' and Charnock's initials appear in two places. There is no further reason to suppose that he was the author of any of them. The language and orthography appear to be older than those of Charnock.

Their titles are :

16. A very good matter of Lune and Sol.

This is prefixed by a couplet in verse : the rest is in prose.

' If thou wold wyst well for to spede  
Use wel thy Paternoster, the Ave Maria and Crede '.

17. Very profitable consell and instruction.

18. Secretum ad solem optimun.

19. A water made of celidonia, much profitable for many diseases.

20. Alyclotte. Work to be profitable.

VII. *MS. Ashmole 1478*, IV (b) contains a treatise beginning :

' The fadyr of thys scripture or scyence as wythowten teaching of erly clergy, not knowyne to him iii lettyrs of hys A.b.c.'

This treatise, which is in Ashmole's handwriting, is described by Black (*op. cit.*) as 'apparently by T. Charnock' but I am unable to discover any reason for the attribution, other than that Charnock was an 'unlettered scholar'. Another exemplar appears in *Ashmole 1445*. VIII. 23.

VIII. *MS. Ashmole 1492*, VI. 17 refers to :

' A catalogue of small manuscript pieces bound up together and marked Number 4 in 4to in which Charnock hath scattered many notes '.

This appears to have been one of Fludd's MSS., but is no longer extant.

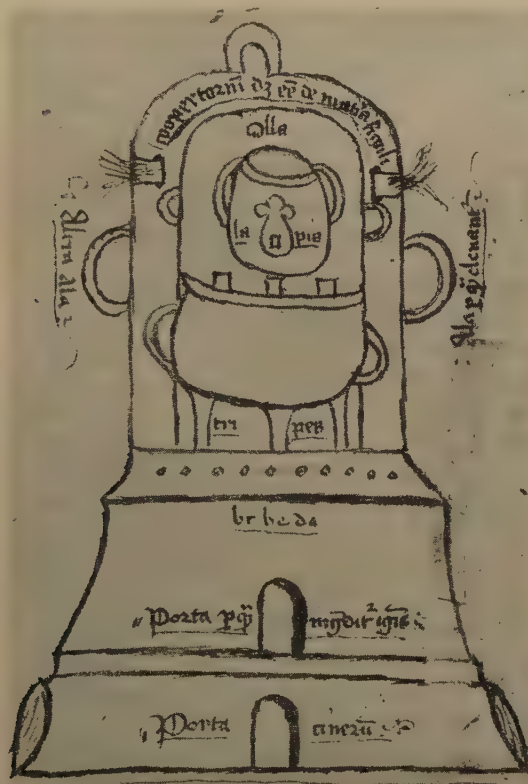
IX. *Charnock's Roll*.

*MS. Sloane 2640* of the British Museum is a parchment roll, written in a late seventeenth century or early eighteenth century hand, rubbed and faint at some parts near the edges<sup>49</sup>. Its contents correspond in all ascertainable respects to those of the latter part of Charnock's roll, as described by Pascal ; but it has nothing on the obverse. It is clearly identified, however, by

<sup>49</sup> I am indebted to the Director for allowing me to see this MS. in the place of storage in which it had been placed for safety.

Charnock's comments, to which his name is appended. It contains nineteen circular schemes, the first two of which are partially obliterated. Pascal says that there were 30 or 40 such schemes, which shows that this MS. reproduces only the latter part of the original. This fact may account for the absence of Charnock's notes from the obverse. In addition to these schemes there are a number of illustrations of alchemical vessels, a drawing of an 'arbor philosophorum', and also a triangular table of combinations of the letters of the

Fig. 4.



An illustration from Mr. Duveen's MS (note 51) of Lull, showing the apparatus for heating the alchemical vessel. This is reproduced in Charnock's roll. The outer vessel is probably the tabernacle to which he refers, resembling as it does the tabernacle in which the Blessed Sacrament is reserved.

alphabet, taken two at a time. Charnock more than once refers to the roll as being a work of Lull, whose addiction to these schemes is well known. An examination of a few of the many manuscripts containing texts attributed to Raymond Lull showed that the roll was, in fact, a transcription of schemes and drawings of apparatus to be found in MSS. of Lull, but not in his printed



works. The schemes and drawings in the roll total thirty, and sixteen of these have been identified in Lullian MSS. The remainder are similar in character and no doubt exist or existed in some MS. which I have been unable to see or which has perished. The alchemical system of the texts attributed to Lull is extremely difficult to understand; for it is hard enough to interpret any alchemical documents without the further difficulty of comprehending Lull's complicated code of permutations of alphabetical symbols denoting various materials and operations. The practical operations principally relied upon seem to have been distillation and circulation in the pelican or other hermetic vessel. It is quite clear that Charnock's operations were chemical and not simply psychological, and that they were conducted by continuous repetitions of a process which completed itself in periods of a week (notes 47, 49). Charnock appears to have understood the practical procedure, and his perplexities were chiefly concerned with the number of cycles of operations required to bring about the successive stages of the process.

The copy of the roll contains a few notes by Charnock in addition to those copied by Pascall (pp. 154-5); and these are given below:

Notes by Charnock on the roll, not quoted by Pascall:

Here is 506 wch is 9 year and 9 months <sup>50</sup>:// if Raimond  
Loully mean it so.

Sibills subtil number is si [obliterated]

Mexelharn his number [obliterated]

Raimundus Roll is just 506.

Never was there thing that did my wit so cumber  
As the Philosopher's number.

q<sup>h</sup> solitary

T. Charnock

1576.

This paper includes all the unprinted information concerning Charnock, of the existence of which I am aware. It is, however, probable that there still exist books and MSS. from which Ashmole, directly or indirectly, copied Charnock's annotations, and possibly others of which Ashmole was unaware. Facilities for the examination of MSS. are still far from restored, and needless to say, I should be very grateful for information concerning any books or MSS. which contain notes by Charnock <sup>51</sup>.

MUSEUM OF THE HISTORY OF SCIENCE,  
OXFORD.

<sup>50</sup> 9 years and 9 lunar months amount to just over 507 weeks: so it would appear that Charnock's unit is a week, as is confirmed by note 47.

<sup>51</sup> I am glad to record my gratitude to Mr. D. Duveen for the loan of a magnificent fifteen century MS. of the Lullian texts, formerly the property of Sir George Ripley, Sir Robert Greene and John Dee.

## GEORGE RIPLEY'S SONG.

By F. SHERWOOD TAYLOR, M.A., Ph.D.

THE work, known as *Cantilena Georgii Riplæi*, sometimes bearing the sub-title *De Lapide Philosophorum seu de Phenice* consists of thirty-eight rhymed stanzas of four lines. *Inc.* En philosophantium in hac cantilena. *Expl.* Ejus fructus uberes et ter dulces. Amen. Latin texts, which vary somewhat, appear in Ripley's collected works <sup>1</sup>/<sub>2</sub> in MSS. Ashmole 1394, p. 67; *Ibid.*, p. 75: 1445. VIII. 2: 1479, 223, and, doubtless, in other MSS. English translations appear in MS. Ashmole 1445. VIII, pp. 2-12 and *ibid.* 41-44. The former of these is the better production and is of interest as bearing annotations in the hand of Thomas Charnock (see this vol., p. 162). This translation was attributed by W. H. Black, who catalogued the Ashmole MSS., to Sir George Wharton (b. 1614) on the grounds of handwriting, but Charnock's annotations show that it must be earlier than 1581, the year of his death.

## GEORGE RIPLEY'S SONG.

Behold ! and in this Cantilena see  
The hidden secrets of Philosophy :  
What Joy ariseth from the Merry veines  
Of Minds Elated by such dulcid Straines !

Through Roman Countreys as I once did passe  
Where Mercuries Nuptiall Celebrated was,  
And feeding stoutly (on the Bride-Groomes score)  
I learn'd these Novelties unknowne before.

There was a certaine Barren King by Birth,  
Composed of the Purest, Noblest Earth,  
By Nature Sanguine (which is faire) yet hee  
Sadly bewailed his Authoritie.

Wherefore am I a King, and Head of all  
Those Men and things that be Corporeall ?  
I have no issue, yet (I'll not deny)  
Tis Mee both Heaven and Earth are Ruled by.

Yet there is either a Cause Naturall  
Or some Defect in the Originall :  
For though the Wombe I never opened  
I under Titan's wings was nourished.

<sup>1</sup> Georgii Riplæi Canonici Angli Omnia Opera Chemica . . . Cassellis. 1649, pp. 421-6.

Each vegative which from the Earth proceeds  
 Ariseth up with its own proper Seeds :  
 And Animalls (at Seasons) speciously  
 Abound with Fruit, and strangely Multiply.

But yet my Nature is so much Restraine'd  
 No Tincture from my Body can be gain'd :  
 And therefore it is Infœcund : nor can  
 It ought availe, in Generating Man.

My Body's Masse is of a Lasting-Stuffe,  
 Exceeding Delicate, yet hard enough :  
 And when the Fire Assays to try my Sprite,  
 I am not found to weigh a grain too light.

My Mother got me of a Sphaere, that I  
 Might contemplate the Globes Rotunditie ;  
 And be more Pure of kind than other things,  
 By Right of Dignity Assisting Kings.

Yet to my Griefe I know, unlesse I find  
 Forthwith Assistance out of my owne Kind  
 I cannot Generate ; My Blood Growes Cold :  
 I am amaz'd to think I am so Old.

Death me Assail'd, even in my Strength of yeares,  
 But yet Christ's voice did penetrate the Sphaeres,  
 And (to Amazement) told me from above  
 I should Revive ; I know well by whose Love.

By other meanes I cannot enter Heaven :  
 And therefore (that I may be Borne agen)  
 I'le Humbled be into my Mother's Breast  
 Dissolve to what I was. And therein rest.

Hereat the Mother Animates the King,  
 Hasts his Conception, and doth forthwith bring  
 And hide him closely underneath her Traine  
 Till (of herselfe) sh'had made him Flesh againe.

'Twas wonderfull to see with what a grace  
 This Naturall Union (made at one Imbrace)  
 Did looke ; and by a League both sexes knitt,  
 Like to a Hill and Aire surrounding it.

The Mother unto her Chast Chamber goes  
 Where in a Bed of Honour she Bestowes  
 Her weary'd selfe, 'twixt Sheets as white as Snow  
 And there makes Signes of her approaching woe,



Ranke Poison issuing from the Dying Man  
Made her pure Orient face look foule and wan :  
Hence she commands all Strangers to be gone  
Seals upp her Chamber doore, and lyes Alone.

Meanwhile the Peacocks Flesh she kindly Eate,  
And Dranke Greene-Lyons Blood (with that fine Meate)  
Which Mercury (although in Passion :)  
Brought in a Golden Cupp of Babilon.

Thus great with Child, 9 months she languished  
And Bath'd her with the Teares which she had shed  
For his sweete sake, who should from her be Pluckt  
Full-gorg'd with Milke which the Greene-Lyon suckt.

Her Skin of divers Colours did appeare  
Now Black, then Greene, anon 'twas Read, and Cleare :  
Oft-times she would sitt upright in her Bed,  
And then again repose her Troubled Head.

Thrice Fifty Nights she lay in grievous Plight,  
As many daies in Mourning sate upright :  
The King Revived was in thirty more  
Whose Birth was Fragrant as the Prim-Rose Flower.

Her wombe which well proportion'd was at First  
Is now Enlarg'd a Thousand fold at least :  
That of his Entrance Men might wnesse this  
The End, by Fires, the best approved is.

Her Chamber's without Rocks, it smoothly stands,  
With walls Erected like her Ivory Hands.  
Or else the Fruit (for want of Fertile ground)  
Had been nought worth, the Sonnes (to beare) unsound.

One Staffe<sup>2</sup> was placed underneath her Bed,  
And on the same another Flourished :  
Trimmed up with Art, and very Temperate,  
Least her fine Limbs should freeze for lack of heate.

Her Chamber doore was Lock'd and Bolted fast,  
Admitting none to Trouble her, First, or Last :  
The Furnace-Mouth likewise contrived, so,  
That thence no vapourous Matter forth could goe.

<sup>2</sup> *Stufa* in the Latin version. The word means a hot-air bath or sweating-room. To preserve the metre read 'stove'.

And when the Issue there was Putrified  
 The Fine from Filthy flesh she did Divide :  
 Resembling Phoebe in her Fullest Light  
 And Breathing, Sol himselfe was not more Bright.

Her time being come, what she conceiv'd before  
 Is now Re-borne, (sets ope her Chamber-door ;  
 And being soe) resumes a Kingly State  
 Possessing fully Heaven's Propitious Fate.

The Mother's Bed which erst stood in a Square  
 Is shortly after made Orbicular :  
 And on each side the Covering (as Round)  
 With Luna's Lustre Rightly doth Abound.

Thus from a square, the Bed a Globe is made  
 Fair, white, and cleare emerges from the shade  
 Of Night, whence doth a Ruddy Nature spring  
 T'enjoy the Merry Scepter of a King.

Hence God sett ope the Gates of Paradise,  
 Where Cynthia deckt him in Cœlestiall Guise,  
 Sublim'd him to the Heavens, and when sh'had done,  
 Crown'd him in Glory, æquall with the Sun.

Foure Elements, Brave Armes, and Polish'd well  
 God gave him : In the mid'st whereof did dwell  
 A Crowned Maid, ordained for to be  
 In the fifth Circle [of the Mystery].

With all delicious unguent flowed she  
 When Purg'd from Bloody Menstruosity :  
 On every side her Count'nance Brightly shone,  
 She being adorn'd with every Precious Stone.

A Lyon Greene did in her Lapp reside  
 (the which an Eagle fed) and from whose Side  
 Blood gushed out : the virgin drunck it upp,  
 Whilst Mercury's Hand did th'Office of a Cupp.

The Milk (admir'd) she hastened from her Breast  
 Bestow'd it frankly on the Hungry Beast,  
 And with a Sponge his face she likewise dry'd  
 Which her own Milke had often Madefy'd.

Upon her Head a Diadem she did weare  
 With Fiery Feete sh'Advanced into the Aire ;  
 And glittering Bravely in her Golden Robes  
 Tooke place ith' Middle of the Starry Globes.

Thus Shee (by all the Planetes, Times, and Signes,  
Dark and Despised Clouds supported), Shines  
and sits in Haire of Nett-worke, whilst the king  
With his Glad Eyes, is, her Beleagreing.

Thus she Triumphantly of kings is Chiefe  
Of Body's sick the only Grand Reliefe :  
Such a Reformist of Defects, that shee  
is worshipped by Men of each degree.

To Priests and Kings she yields an Ornament  
The sick and needy sort she doth content :  
What Man is hee will slight so Rich a Store,  
As drowns the very thought of being Poore ?

Wherefore (O God ! ) vouchsafe to graunt us this,  
That through th' Encrease made of its species  
And Second Birth, wee may ones and Agen  
Enjoy its Firtile and Sweete Fruits. AMEN.

MUSEUM OF THE HISTORY OF SCIENCE,  
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## THE BOLOGNA ENIGMA.

By C. G. JUNG.

EUROPEAN history in the years since 1933 has given such a display of psychopathological material as cannot fail to interest the psychiatrist. The symptoms indeed are all too plentiful, and among the many signs of mental aberration, none is more conspicuous than the symptom of *projection*, by which we mean the psychological mechanism described in the gospels as beholding the mote in thy brother's eye and not considering the beam in thine own. This phenomenon is not, of course, confined to psychopathology, for it is one of the fundamental modes of function of the soul. It is, in fact, a normal primitive phenomenon (Urphänomen) and it is therefore observable always and everywhere. Only when it exceeds certain limits does projection become pathological, for we usually expect and find in our neighbours a full and reprehensible version of what we fail to see in ourselves. So, when certain orators beyond the Rhine made prophecies or accusations, every child knew that the messages were sent to the wrong address, that the country spoken of should have been Germany, not Britain or America. Projection is like a veil or fog that covers things and prevents the discovery of the truth about them; and just where our ignorance of what we are talking of should make us examine it with especial care, projection intervenes with a quick and cheap solution of our difficulty in understanding it. It required the whole of the powers of science to roll away the fantastic mist of projection from Nature and history and show them in their real form; and after this war a similar effort is needed to dispel the clouds that surround a whole nation.

In every age, however, there are a few who have a more or less clear perception of the questionable character of current ideas. In ancient Greece the Sophists set traps for the intellectuals of the time by their use of an unsound logical system, not merely as a malicious pastime, but with the intention of rousing the minds of their hearers to the inadequacy of logical operations. In the later Middle Ages also, when a world-outlook was imposed upon mankind without an attempt at investigation, there were those that amused themselves by setting traps for their credulous contemporaries: but while in Hellenistic times logical phrases were used for this purpose, the Middle Ages employed mysterious Paradoxa or puzzle-questions, aimed at the feet of clay of the mediæval world-outlook.

In the course of my psychological researches into the wide field of mediæval alchemy, I came across a bait of this kind, intended to lead the intellectual

speculators of the sixteenth century into projection, and thus to catch them in a trap. So marked was its success that the incident remained for more than two centuries a *cause célèbre*, though it later sank into oblivion.

The strange title of my article, the Bologna Enigma, is the name of this famous mouse-trap, and is the title of a supposedly ancient text, which runs as follows :—

D.M.

AELIA LAELIA CRISPIS,

nec vir nec mulier nec androgyna  
nec puella nec iuvenis nec anus,  
nec casta nec meretrix nec pudica,  
sed omnia

Sublata

neque fame, nec ferro, nec veneno  
sed omnibus.  
Nec coelo nec aquis nec terris  
sed ubique iacet.

LUCIUS AGATHO PRISCIUS

nec maritus nec amator nec necessarius  
neque moerens neque gaudens neque flens  
hanc neque molem, nec pyramidem nec sepulchrum  
sed omnia,

Scit et nescit (quid) cui posuerit.  
(Hoc est sepulchrum, intus cadaver non habens.  
Hoc est cadaver, sepulchrum extra non habens  
sed cadaver idem est et sepulchrum sibi.)<sup>1</sup>

These may be translated :—

To the male Gods/Aelia Laelia Crispis,/neither man, nor woman, nor hermaphrodite,/neither girl nor boy nor old woman,/neither chaste, nor whore, nor bashful,/but everything./Cut off neither by hunger, nor by the sword, nor by poison,/but by everything./Neither in the heaven, nor in the water, nor in earth/she rests, but everywhere.

Lucius Agatho Priscius/neither husband nor lover, nor relative,/neither mourning, nor rejoicing, nor weeping/ (has) neither (set up) this funeral mound, nor pyramid nor sepulchre,/but everything./ He knows and knows not/for whom he has set up (what he has set up)/(This is a sepulchre which contains no corpse within./This is a corpse which has no sepulchre/but the same thing is corpse and sepulchre to itself.)

<sup>1</sup> The part which is contained in brackets is contained in the so-called Milan version, but is lacking in several others.

This text is an epitaph which is mentioned for the first time by a certain Marius L. Michael Angelus in a work published in Venice in 1548<sup>2</sup>. The text is supposed to have been inscribed on a marble slab, said to have been found in a wall between the church and 'the villa of Marcus Antonius de la Volta at the first milestone outside the Porta Mascharella' in Bologna. Malvasius himself says that in his day (the second half of the seventeenth century) the slab had disappeared, probably because the marble was used for the making of lime. However, Malvasius cites as personal eye-witness Johannes Turrius of Bruges, who writes<sup>3</sup> in January 1567 to Richardus Vitus of Basingstoke that he had himself seen the epitaph (or at least had read it—*quod hisce oculis lectum*). Several of the engraved letters had become, 'on account of the length of time *et quasi quadam rubigine corrosae*<sup>4</sup>, which is a proof of the age of the epitaph'. Malvasius mentions as a further eye-witness, J. Casparius Gevartius<sup>5</sup>. While many, even as late as the eighteenth century, accepted the epitaph as genuine, the traveller Jacob Spon, on the other hand, already in 1676, writes: 'Je pretends même que celui qui l'a (sc. L'inscription) fait n'entendait pas seulement l'oéconomie des noms Latins. Car Aelia et Laelia sont deux familles différentes et Agatho Priscus sont deux surnoms sans avoir aucune famille jointe'. 'Si quelque esprit rêveur et melancholique veut s'amuser à son explication il s'y peut divertir: pour moy j'ay déjà protesté que je ne l'estimois pas antique et que je voudrois pas prendre la peine d'en chercher le mystère'<sup>6</sup>. Accordingly the inscription is contained in the *Corpus Inscriptionum Latinarum*, but amongst the *Falsae*<sup>7</sup>.

<sup>2</sup> I take this from the Commentary of Cauesar Malvasius: *Aelia Laelia Crispis Non Nata Resurgens*, Bononia; 1683. I was unable to find the original work of Michael Angelus.

(Translator's Note: This volume is contained in the British Museum. The title is:—

*Expositio. L. Marii. L. Michaelis Angeli super. . . . ænigma Elia Laelia Crispis* 40. Venice, 1548, 16 pp. The origin of the inscription is not given. It takes the form: Hoc est ænigma/tantae virtutis tantaeq; sapien/tiae ornatissimum/.AM. PP.D [explained as 'Aquae Maris Pluviam pluit Deus']/Elia Laelia crispis neque vir, neque foemina, neque an/drogæna, neque iuvenis, neque anus, neque casta ne/que meretrix/Sed omnia :/Neque coelo, neque ferris, neque aquis, sed ubique/Jacet./Sublata neque ferro, neque fame/neque veneno :/Sed Omnibus/helia Crispis aliâs in cavo acuto neque vir, neque/Amator,/neque flens,/neque ridens sit nescit, cui/Posuerit,/Hoc est sepulchrum intus cadaver non habens:/Hoc est cadaver sepulchrum extra non habens:/Sed cadaver idem es, et sepulchrum sibi :/. The commentary is not alchemical, but interprets Elia Laelia Crispis as 'the element of water'.)

<sup>3</sup> Cf. Richardus Vitus Basinstochius *Ael. Lael. Crisp. Epitaphum Antiquum, quod in Agro Bonomiensi ad huc videtur*. Dordrecht, 1618.

<sup>4</sup> Corroded by the lapse of time, and; as it were by a sort of rust.

<sup>5</sup> Gevartius, however, only mentions (*Electorum libri III Lutetiae*, Par. 1619 L. III p. 81), an epitaph contained in a wall of the Villa della Volta.

<sup>6</sup> *Voyage d'Italie, de Dalmatie et du Levant fait aux années 1675 et 1676*. Amsterdam, 1679, Tome 1, p. 53.

<sup>7</sup> Vol. XI p. 1, 1, 15x, 88x, has been kindly shown to me by Prof. Felix Staehelin.



Spon noticed the trap, and therefore did not wish to go to the pains of explaining the mystery of the inscription. Nevertheless there were countless scholars in the sixteenth and seventeenth centuries, who tried their wits upon our epitaph. Malvasius in 1683 had already collected forty-five commentaries, and his list was by no means complete. At the beginning of the eighteenth century there were over fifty. Amongst the authors of these are the following well-known names: Ulisse Aldrovandi of Bologna (1522-1605), a famous doctor and philosopher; Dr. Hieronymus Reusner, the author of *Pandora* (printed in Basle in 1588), one of the well-known alchemical treatises, interesting chiefly for its illustrations; and finally Dr. Michael Majer from Frankfurt, a famous physician and important writer on alchemy (1568-1622).

It is amazing that these illustrious humanists did not notice the blunder of the two gens-names; but apparently the text was too seductive. The nonsense of the text, which cannot in any way be satisfactorily explained, offered them a welcome darkness, where everybody could try their wits, or read into it whatever might be especially dear to them; and, in fact, the powers of phantasy extracted from it everything that was incomprehensible, and filled its emptiness with projections. Alchemy, likewise, is a real museum of projections, and, indeed, its history should never have been treated by chemists, for it offers an ideal hunting-ground for the psychologists. So the commentaries on our inscription include a miscellaneous medley of attempts at explanations, all of which are most significant for the psychologist. Among the scholarly interpreters there were not a few philosophers—for the most part the natural philosophers of those days, that is to say, the alchemists, and these clearly show how saturated they were with their particular system of projection. I was unfortunately unable to obtain all the commentaries, but the original works of most of the authors mentioned by Malvasius were traced, and also several which are either not mentioned by Malvasius, or which belong to a later period.

This inscription is not an old text, but a relatively late invention, and we may therefore expect the text not to be a *unicum*, but to have predecessors and origins. For example, the threefold cause of death points to the *motif* of the threefold death-prophecy in the old French *Roman de Merlin* and its subsequent imitations in the Spanish and English literatures of the fifteenth century<sup>8</sup>. However, a direct anticipation of our text is contained in the so called *Hermaphrodite Epigram*, ascribed to Mathieu de Vendôme (c. 1150). It runs as follows:—

‘Cum mea mater gravis gestaret in alvo,  
Quid pareret fertur consulis deos.  
Phœbus ait: Puer est; Mars: Femina; Juno: Neutrum.  
Jam qui sum natus Hermaphroditus eram.

<sup>8</sup> For this see J. P. Wickersham Crawford: *El Horoscopo del Hijo del Rey Alcazaz en e ‘Libro de Buen Amor’* Revista de Filología Española, XII, 180 ff. The above epigram of Mathieu de Vendôme gives an example of such prophecies of death.

Quaerentes letum dea sic ait : Occidet armis ;  
 Mars : Cruce ; Phoebus : Aqua. Sors rata quæque fuit.  
 Arbor obumbrat aquas ; conscendo ; labitur ensis  
 Quem tuleram casu, labor et ipse super ;  
 Pes hæsit ramis, caput incidit amne, tulique  
 —Vir, femina, neutrum—flumina, tela, crucem<sup>9</sup>.

The scholar Richardus Vitus of Basingstoke mentions that a certain Agathius Scholasticus has, so to speak, plagiarized our epitaph, as he had written the following epigram :—

ὁ τύμβος οὗτος ἔνδον οὐκ ἔχει νεκρὸν  
 ὁ νεκρὸς οὗτος ἐκτὸς οὐκ ἔχει τάφον  
 ἀλλ' αὐτὸς αὐτοῦ νεκρὸς ἐστὶ καὶ τάφος<sup>10</sup>.

Agathius Scholasticus has been identified as a Byzantine historian who flourished at Byzantium c. A.D. 582. He wrote a *κύκλος τῶν νέων ἐπιγραμμάτων*<sup>11</sup>, many of the epigrams of which (ours among them) are still contained in the *Anthologia Palatina et Planudea*<sup>12</sup>. Agathius, so far from being an imitator of our epigram is, on the contrary, the undoubted source, at least of the so called Milan addition.

The alchemist Michael Majer, who has also contributed to the explanation of the epitaph, mentions as its basis an 'enigma Platonicum', which runs as follows :—

Vir non vir, videns non videns, in arbore non in arbore, sedentem non sedentem, volucrem non volucrem, percussit non percussit, lapide non lapide.

The solution of this riddle is : A one-eyed eunuch touched with a pumice-stone a bat hanging from a bush.

This paradoxical negation-form is by no means confined to the composition of more or less childish riddles, but is also a powerful weapon of rhetoric employed to endow a proposition with special emphasis. In this form we meet it in the anecdote of *Meister Eckharts Tochter*.

A girl came to a monastery and asked for Master Eckhart. The porter said : 'Who shall I say you are ?' She said : 'I don't know'. He said :

<sup>9</sup> S. L. Traube : *Abhandl. d. Philos. Philog. cl. d. h. Bayerisch. Akad. d. Wissensch*, XIX, 317 ff. The translation of the epigram runs : 'When my mother was pregnant and carried me in her belly/ she asked the Gods, so they say, what she was going to give birth to Phoebus said : It is a boy : Mars : a girl ; Juno : neither/ When I was born I was a hermaphrodite./On the question of death, the goddess said : He will perish by weapons./ Mars : On the cross : Phoebus : By water. Destiny has appointed that it should be all of these./The tree overshadows the water. I climb up,/The sword, which I carried, slipped from me by chance, and I fall onto it/My foot is entangled in the branches, my head falls into the stream/and I—male, female, neither—have suffered water, weapon and cross.

<sup>10</sup> s. translation p. . 'Hoc est sepulchrum, etc.'

<sup>11</sup> Collection of new epigrams.

<sup>12</sup> Cf. *Anthologia Graeca Epigrammatum*, ed. Hugo Stadtmueller. Vol. II pars prior, p. 210, No. 311.

'What is it you don't know?' She answered: 'That I am not a maiden, nor a woman, nor man, nor wife, neither widow nor virgin, neither master nor handmaid nor servant'. The porter went to Master Eckhart: 'Come out and see the strangest creature that I have ever heard, and let me go with you, and incline your head to her and say: 'Who calls me?'' He did so. She spoke to him in the same way as she had spoken to the porter. He said: 'Dear child, your speech is truthful and to the point: tell me better what you mean by it'. She said: 'If I were a maiden, then I would be in my first innocence; if I were a woman, then I would bear the eternal word in my soul for evermore; if I were a man I should have a strong defence against all ills; if I were a wife, I should be faithful to my one dear and only husband; if I were a widow, I should always be longing for my only love; if I were a virgin, I should be in the service of a distinguished family; if I were a hand-maid I should be subjected to God and all creation, and if I were a man-servant, I should do heavy work and serve my lord with all my might without argument. All these things I am not, and I am a thing like another thing and go my way'. The master went and said to his disciples: 'I have heard the purest human being that I have ever met, according to my idea'.

Similarly, and for similar reasons the Indian philosophy occasionally speaks most effectively in the rhetorical form of negation, as the following verse shows:—

I am no human being—nor am I a God or Goblin,  
 No Brahmin, warrior, citizen, Shûdras,  
 No Brahmin novice, father of a family or hermit of the woods,  
 I am no beggar-pilgrim—  
 My being is that of one awaking to the self.

A rhetorical form which at the same time serves two extremes, the ridiculous and the sublime, is a most useful means of mystification. It is therefore not astonishing that in view of the disguise of this apparently antique epitaph, by far the greater part of the commentaries take this point of view. Malvasius, on the other hand, though he was completely convinced of the genuineness of the inscription, and tried to confirm his opinion by the collection of numerous Roman parallels, expresses himself rather disrespectfully as regards its meaning. At any rate, he scents no philosophical secret behind it, but rather an event in the realm of the all-too-human, for his interpretation is as follows:—

('Epitaphium) loquitur nempe . . . de filia Lælia nascitura, eademque sponsa Agathonî designata, sed non filia, sed non sponsa, quia concepta, non edita; quia non orta, sed aborta; qua propter tali ac tanta spe frustratus Agatho, jam pridem delectus in conjugem, et a sorte elusus, hac Aenigmatica Inscriptione iure merito sic et ipse lusit, vel ludentis speciem prae-buit.

This explanation is witty and tolerably adequate. Malvasius might have been satisfied with it, but, strangely enough, something still troubles him, namely the person of the originator of the inscription, *i.e.*, L. Agatho. He



calls him 'modo huius, modo illius Scientiae peritissimum . . . auspicatissimi . . . Ternarii Cultorem eximium', and compares him as a 'ter maximum' with Hermes Trismegistus himself—apparently thinking of the well-known final sentence of the *Tabula Smaragdina*: 'Itaque vocatus sum Hermes Trismegistus habens tres partes philosophiae totius mundi'. He sees the justification for this parallel in the tripartition of the inscription. It seems an adventurous guess, that a second Hermes Trismegistus, of all people, should be the inventor of the inscription. If, on the other hand, we take into account the dissemination of alchemical thought in the sixteenth and seventeenth centuries, the idea of Malvasius seems much more probable and, indeed, many of the commentaries are of an alchemical nature.

It seems that the earliest of these is the *Commentarium* of Dr. Nicolas Barnaud of Crest (Dauphine). His basic hypothesis is as follows: Ælia and Lælia impersonate two different people. (He seems to have looked upon the two family-names as a hint!) Ælia (R. Vitus writes Hælia) means *solaris*; L-Ælia, on the other hand (apparently because of the L which is prefixed), is equivalent to *lunaris* and both together form the one person Crispis. The *unity* of this person points to its being the 'arcane substance', of which Barnaud says: ' . . . hanc omnia esse, omnia in se habere, quibus indiget ad sui perfectionem, omnia de ipsa prædicari posse et ipsam vicissim de omnibus . . . Unum enim et totum ut ait maximus Chimes, ob quod sunt omnia, et si totum non haberet totum, nihil totum esset'. Because it had been L. Agatho's intention 'to display the art, which teaches everything, which is the most precious of all arts and is hidden beneath this riddle', in order that the scholars should concern themselves with 'the art and the true science which is above all others in dignity', the author does not fail to add at this point that 'This most holy apprehension (*agnitio*) of God and Christ on which our salvation depends', is of course excepted. The attributes of Ælia from 'nec vir' to 'nec pudica' are all of them, in their positive forms, also the attributes of the 'arcane substance', as can be proved from the literature of alchemy.

'Sublata neque fame', etc., is explained by Barnaud in the same way. The 'arcane substance' does not suffer from hunger, because it eats itself up, being an Ouroboros; it does not die by the sword, but 'iaculo proprio se ipsam interficit'; nor does it die from poison, because it is the 'Alexipharmacon' itself, a 'bonum venenum', as the author puts it, through which it 'se ipsam revivificat'.

Its Mortification is the result of its consumption of itself through the 'gladius Mercurii' and the venom of the dragon. Barnaud takes the sepulchre to be no edifice at all, but a symbol for the 'medicina summa et catholica'. The 'cui posuerit' he explains by saying that Agatho of course could not know for which future discoverer he had left this symbol.

Unfortunately it is impossible here to demonstrate how much psychology of the unconscious is contained in this explanation. This has been done

elsewhere. On the other hand, the projected psychology in the experimental explanation of Ulysses Aldrovandus is immediately convincing. According to him L. Agatho was a 'homo verus', a real human being, Ælia, on the other hand, a 'ficta foemina', or rather a 'malus genius' or an 'improbis spiritus', a 'Sylvana, Nympha, Hamadryas', 'a Junonian oak' 'infixa et adhaerens'. When the oak was felled and burned it was necessary for her 'to find refuge as a corpse, as it were, in this sarcophagus'. Accordingly to Ulysses Aldrovandus she was 'celebrated, described and characterized' in this epitaph 'by her beloved Agatho'. Aldrovandus says: 'Dico Æliam Læliam Crispem ex Hamadryadibus unam fuisse . . . *i.e.*, Quercui in Suburbano agro Bononiensi applicitam, seu inclusam, quae mollissima simul et asperrima apparens jam a bis mille forsitan annis inconstantissimos Protei in morem tenens vultus Lucii Agathonis Prisci civis tunc Bononiensis Amores ex Chao certe, *i.e.*, confusione Agathonia . . . elicitos anxiis curis et solitudinibus implevit'. In support of his hypothesis that Ælia is a dryad the author cites an epigram (a genuine one this time) from the 'ager Bononiensis'; it runs as follows:—

CLODIA PLAVTILLA  
SIBI ET  
QVERCONI AGATHONI  
MARITO OPTIMO,     -     etc.

This inscription is contained in the CIL, but there it runs:—

Q. VERCONIO AGATHONI.

Thus it refers to a Quintus Verconius, who does not support the oak-hypothesis. But it seems that the oak took the author's fancy, for which the 'Querconius' was probably only the external cause. What is really behind it is shown in the poem which he cites as further contribution:—

Dentro un giardin di vaghi fiori adorno  
Corre un fior rosso, e una bianca Rosa

Dodici rami cinge d'ogn' intorno  
Una gran Quercia, che nel mezzo posa,  
E d'ogni ramo grande, e grosso ch'hà  
Quattro sole, e non più ghiande ei' dà.

The garden, the red and the white rose, the world-tree or sun-tree with its twelve branches, the four suns, all these are obvious parallels to the alchemist's Rosarium with the red and white rose, the 'servus rubeus' and the 'femina alba', the oak in the Royal bath, and the tree in the Western country with the four-coloured blossoms. Reusner has depicted this tree in his *Pandora* (1588) as a female being, her head wearing the tree-top. The representations

of sun- and moon-trees are numerous. Although Aldrovandus does not refer to alchemy, he produces material of association which leads us directly back into alchemical ways of thinking; not this time through doctrinaire thought, but by means of the charming fancy of this fairy-like being whom he describes so excellently. This '*ficta fœmina*' completely corresponds to that type which psychology describes as 'Anima', and alchemy as 'foemina alba'. Richardus Vitus had already anticipated this type in the sixteenth century; for he thinks that Ælia was a 'Niobe transformata', and he says of her in Vergil's words: 'Igneus est illi vigor et coelestis origo, a qua nunc hic Hælia nominatur'. He thinks she was called Lælia because of Luna, who secretly *influences the souls of men*. For the human soul is 'androgyna, cum virgo viri et vir muliebrem gerit'—which means I have to cede to Vitus my claim to priority for the 'Anima theory'. Vitus also seems to have made the observation that in case of a too youthful attitude the anima likes to appear in dreams as an old woman, for he says that the soul is called 'anus' since the 'animus' of young people is as yet weak. In a letter dated February 1567, he writes to Joh. Turrius of Brugge, that the soul is an idea 'of such great power that it creates the forms and the things themselves', and that it also contains so to speak the *αὐτότης* totius humanitatis'. He says she towers above all individual differences: 'Sic si se ipsam volet anima cognoscere, in animam debet intueri, inque eum præcipue locum, in quo inest virtus animæ, sapientia'.

This is just what happens to the elucidators of our epitaph. In its darkness the soul looks on itself and feels those archetypal structures which underlie the unconscious, and which form the 'matrix' of wisdom. For Vitus it is: 'Nihil aliud esse hominem quam animam ipsius'. What he describes as 'soul' is actually more an 'anima mundi', which is related to the modern notion of anima in rather the same way as the 'collective unconscious'. The inscription, Vitus ends, relates to the anima as the form stamped upon and connected with the materia, and he sums up what has happened to all the commentators, namely, the projection of the contents of their souls. This does not involve anything very extraordinary or unexpected, for in the sixteenth and seventeenth centuries it was possible without hesitation to fill in the gaps in positive knowledge with the fragments of archetypal wisdom, which was very often done, for example, in alchemy, and has made the latter a real psychological treasure-trove. Actually these projections, unlike those which we have experienced and are still experiencing today, are as harmless as the anthroposophical *Geisteswissenschaft* or *Geheimwissenschaft* in which we may still find the state of innocence that characterised the *Erkenntnissskritik* of the Middle Ages.

What you are unconscious of and what you project depends a great deal upon the state of contemporary consciousness. The development of the *Erkenntnissskritik* has raised the mortgage of projection from modern science, which therefore offers no field for it. The human psyche is the new centre of interest. It is sufficiently unknown to give the obscurity necessary to shelter



projections. Moreover we have so far forgotten the salutary doctrine of original sin that we can afford the luxury of being convinced of our own excellence. All that is inferior, mean and evil, though it doubtless exists, was done by the other people—Jews or degenerate people of the second rank, such as the English, French, Dutch, Swiss and so on. The wheel has come full circle, and further than was foreseen : now it is the Germans, and to make it worse, there is evidence for the fact. This is awkward for other survivors of the world-war, for, the worse the things that come to light in Germany, the less will we believe in our own shadow and use on ourselves the prescription of Vitus—*in animam debet intueri*. If my neighbour has done evil, he thereby harms me personally, for he steals my guilt ; that is to say he causes my shadow to be lost and makes me seem pleasantly good in my own eyes, in itself a new reason for projection.

Since the Christian Middle Ages, being conscious of sin, could credit man with a great part of its evil, it could project relatively harmlessly, as in the Bologna Enigma—though there were exceptions, such as the Inquisition, the persecution of witches, and sometimes of the Jews. Our age and times to come must disinfect the human psyche from the visitation of demons, as it has already disinfected Nature. This praiseworthy experiment must be dared, although there will arise the painful question of what is to be done with Hamadryads and the like, when there is no dwelling-place for them even in the human soul. But this task we can confidently leave to the distant future.

TWO UNRECORDED EIGHTEENTH CENTURY FRENCH CHEMISTS  
AND AN EARLY ITALIAN ALCHEMICAL 'UNICUM'.

By DENIS I. DUVEEN, F.R.I.C.

EARLY in 1939, two small seventeenth century works, in their original vellum bindings were acquired. Both dealt with Chemistry, were written by Frenchmen and published in 1671. The names of the authors are Jean Char. de Marsigny and Jean Malbec de Tresfel, and as they are unrecorded in the usual bibliographies, it may be of interest to describe them in some detail.

De Marsigny's work consists of a small octavo volume (pp. —[6]—116), and bears the following title :

TRAITTE  
des  
ELEMENS CHYMIQUES

ou est donné aux curieux  
de l'Art, la connaissance  
des Sels, dissolvans, menstruës,  
et Precipitans.

Par  
Jean Char. de Marsigny  
de son Laboratoire le 2 Juin 1670

A ROUEN

Chez Louis Cabut, Imprimeur-Libraire  
rue Ganterie, dans la Court du Fer à Cheval.

M.DC. LXXI

He commences by an 'Avis', in which he informs us that his decision to publish the present treatise was caused by the solicitations of his audiences at lectures, apparently given in his laboratory (at Rouen). This gives the work a particular interest, as it is an early example of a text-book written for use in conjunction with a course of lectures, accompanied by experiments, and this at a time when speculative rather than operative chemistry was popular. The preface, whimsically enough, advises the would-be chemist that he must emulate the parables of the man who built his house on rock rather than sand, and of the wise virgins with their stock of oil, and that he must be prepared for laborious work, long vigils and unpleasant odours. It also explains the general scheme of the work, which is divided into two main parts: the first devoted to what we should now term general theory, and the second to practical work. The first part occupies only 24 pages, and *inter alia* contains a short dictionary of contemporary technical terms; the various degrees of heat are

dealt with at length and the customary apparatus of the period is shortly discussed and described. Paracelsus is almost the only authority quoted, and the strictly practical tenor of the explanation of various phenomena given is most noticeable. The second part consists of the usual chemical and medical receipts, but is characterised by a strict avoidance of such nostrums as extracts of toads or vipers and similar concoctions, and once again the reader is struck by the highly practical directions given.

Malbec de Tresfel, who translated Sir Kenelm Digby's book of secrets into French <sup>1</sup> (Paris 1669), like de Marſigny, published his work in 1671, and also divided it into two main sections, on theory and practice respectively. It is also strictly practical, of somewhat smaller format than the latter's book (pp. [4], 5-116), and has the following title :—

A B R E G É  
de la  
T H E O R I E  
et des veritables  
Principes de l'Art  
appelle  
C H Y M I E  
qui est  
la troisième partie ou colonne  
de la vraye Medecine  
Hermetique  
Divisé en deux parties  
qui sont Theorië et Pratique.  
Où l'ont voit clairement les abus de la fausse  
Chymie, les principes de la veritable,  
et les raisons du mépris qu'on  
en fait aujourd'hui.  
Dedié à M. Valot, Conseilleur du Roy.  
et premier Medecin de sa Majesté.  
Par Jean Malbec de Tresfel,  
Philosophe et Artiste.

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A PARIS  
Chez l'Autheur, rue Mazarin, derrière le  
College des Quatre Nations. 1671  
Avec permission.

Although neither Paracelsus nor any other authority are quoted by name, de Tresfel is evidently a close follower of Paracelsus, and the theoretical side of the book is an exposition of those theories enunciated by Paracelsus while the practical side consists of various recipes for medicaments recommended by him. Added interest is given to the work by the inclusion, at the end of many of the

<sup>1</sup> *Recueil de Mémoires et Secrets tirés des Mémoires du Chevalier Digby.*



recipes, of details of the sophistication practised by the apothecaries of the time. This work, too, is characterised by its practical nature and the absence of extravagant mystical phrases which characterise so many contemporary works of a similar nature.

These two authors are connected by the similarity of the general form and content of their works and the coincidence of their having been published in the same year. A further link is provided by the fact that de Tresfel warns his readers specifically against Jean Char. de Marsigny. He alleges that the latter is an ignorant impostor, had worked with him, stolen some of his secrets, did not even understand what he had stolen, and was trying to impart it to others. Details of neither of these authors are to be found in any of the usual bibliographical or biographical sources, but they are evidently of interest to the student of the History of Chemistry.

The hitherto unreported Italian alchemical work is the *Verita de la Alchimia* of Angelus de Fortibus, which was published at Venice in 1525. The work consists of 28 unnumbered pages, is printed in neat gothic type and is divided internally into two books.

**C**omincia lo libro nominato verita de la  
Alchimia : in loquale ragioneuolmente se  
narrano quasi tutti li modi excellenti (secò  
do la vera intentione de p̃bilo . z magistri  
de questa arte) per fare lo elepire o vero la  
p̃io p̃bilo . z medicina: tanto eccellente: de  
siderata da tutti: z puo per ragione z expe-  
rientia mostrando se eleze lo meglio p̃ qual  
se voglia persona operare: ad tal che onore  
uolmente possa viuere in questo mon-  
do. composto per lo excellentissi-  
mo dottor delle arte z medi-  
co aureato: Adifer An-  
gelo de fortibus :  
ad tal pro-  
posto.



Title page of *Verita de la Alchimia*, Venice, 1525.

It is a small duodecimo, and we reproduce the title page herewith; the device on the original measures 35 by 45 mm. The colophon at the end runs thus: *Impresso in Venitia per maistro Stephano de Sabio: qual habita a Santa Maria formosa: nel anno 1525, a li 10. del mese di Zenaro.*

Apart from a strictly bibliographical interest attaching to the book on account of its rarity it is also of value to the student of the history of science, for it is not only one of the earliest works devoted entirely to Alchemy, but is also a book of practical recipes and entirely devoid of occultism or mysticism; and this is unusual for alchemical works published in the first half of the sixteenth century.



## REVIEW.

**Paracelsica, Zwei Vorlesungen über den Arzt und Philosophen Theophrastus.**

By C. G. JUNG. Pp. 188. Rascher Verlag Zürich und Leipzig, 1942.  
Fr. 8.75.

THIS important book should be read by every serious student of Paracelsus. Here for the first time we have an outline of the system of thought of Paracelsus, his experimental application of his ideas to the realm of medicine and his speculative theories, which we would call today his psychology—or more exactly, perhaps, his psychological approach to the problems of the conscious intellect in its relation to what is called the unconscious. I say that it is the first time, because no modern authority before Dr. Jung has been able to interpret the abstruse and obscure vocabulary of our author. Dr. Jung's interpretation is based on an intimate knowledge of the terminology of alchemy, which—and this is his contention—is psychological as well as chemical. In Dr. Jung's most recent work, *Psychologie und Alchimie*, which will be discussed in a future number of *Ambix*, a detailed analysis of the psychological aspect of alchemy is given; in the work before us, however, we have a concentration, as it were, of alchemical ideas, a personal system of psychology in terms of alchemical conceptions, a system which, unlike other contemporary experimental or speculative philosophies was made entirely new, through the profound genius of its creator.

What does Paracelsus mean by alchemy? It is more to him than a philosophy of Nature, for Paracelsus was a natural philosopher in the sense that he applied his experimental knowledge not only to the physical body of man, but also to the mind and to what he conceived as the soul. As Dr. Jung points out, Paracelsus had in view as the ultimate state of man nothing less than the state of 'immortality', as he, Paracelsus, conceived it to be; and as the Christian believes that this can only be achieved through the means of the sacraments, Paracelsus—although not conscious of any conflict, as we should be today—endeavours to prove that the alchemical act, the 'sacrament' of the *opus alchymicum*, is the key that unlocks the door. This appears to him possible because Nature is not matter alone, but spirit as well; if this were not so the only source of spirit would be the human reason, a belief which, according to Paracelsus, is a fallacy. Spirit has another source, Nature to wit, and it is the light of Nature, *lumen naturae*, on which Paracelsus lays such stress. According to Dr. Jung's interpretation, this light is that which works through what is today called the unconscious, correcting and supplementing the conscious process of the intellect. In the words of Dr. Jung, it is a far-reaching autonomous psychic system that is not limited to human reflexes, but goes beyond human consciousness and anticipates in its symbols future processes of the conscious mind. The *lumen naturae*, therefore, to speak in modern terms, is something super-conscious, and, it is in the terms of the super-conscious, therefore, that Paracelsus defines the higher aspect of Nature, and this conception is the keystone of his system. To use the modern terminology, as defined by Dr. Jung—alchemy, is, for Paracelsus, the process of individuation, the process of becoming perfect and immortal, of becoming 'man' in the highest sense; so the alchemist had to be a physician before he could attempt



to cleanse the soul of its imperfections and thus assist it to achieve this end. The final process of alchemy is the union of the super-personal unconscious with the conscious will and intellect, flooding the latter with the light of the former and, according to Paracelsus, those who experience this have fulfilled their life's destiny.

Paracelsus the physician was in opposition to the medical authorities of his day—Galen, Avicenna, Rhazes and all the rest of them—and his furious invectives never cease to increase the difficulties of the student of his works. It is interesting to note that he praises Hippocrates, and his esteem for certain of the alchemists, such as Hermes, Morienus and Archelaos, is shown by numerous quotations from their writings. The physician, says Paracelsus, must be an alchemist and an astrologer.

The physician as alchemist must be aware of the similarity between the human microcosm and the cosmic macrocosm, the latter including the invisible as well as the visible world. The invisible world contains the cosmic *arcana*, or secrets, which must be known to the physician, and one of these secrets is 'Melosina', a term frequently used by Paracelsus. Melosina is a kind of magical entity that lives in the blood, and as blood, according to the ancient teaching, is the dwelling place of the soul, only alchemical remedies produced by alchemical means can influence Melosina, upon which ordinary medicine would be without effect. As therefore only alchemical medicines influence the *arcana* (which are the media through which the human body is healed), orthodox medical remedies are of no use whatsoever. It is not difficult to understand why the medical faculty of Basle expelled Paracelsus!

The physician as astrologer must understand the 'Firmament', which is not only a heaven of stars but also a corpus, that is 'a part or the contents of the visible human body'. The *corpus sydereum* is the source of illumination through the medium of the Light of Nature, the 'natural light', which rests in the Firmament. According to Dr. Jung this intuitive vision is Paracelsus' greatest achievement, the speculative possibilities of which are only now beginning to be revealed. Paracelsus calls the Heaven the *homo maximus*, and the *corpus sydereum* is the representative of the *homo maximus* in the individual; in other words, the origin of disease in man is to be found in the constellations of the stars. Dr. Jung draws attention to Paracelsus' treatment of mental ailments; wherein the proper words and phrases can stimulate the patient and dissolve the shadows of his mind. But the physician can do this only if he allows the Light of Nature to instruct him; that is to say, he must cure intuitively, because the *textus libri Naturae* can be read and understood only in the state of illumination.

In his philosophical writings Paracelsus uses a complicated vocabulary, as has already been mentioned, in order to explain the alchemical process as he conceives it. His philosophy treats of nature, of the nature of man, of the elements of the imagination, of the very complicated mechanism of human consciousness in its relation to the macrocosm; in fact, if we accept Dr. Jung's statement that alchemy in its psychological aspect is a path of salvation of the soul, it will become clear to us that the whole Paracelsian system on the speculative side describes with minute detail all the pitfalls on this path and all the means by which the soul can be 'activated' in order to continue its upward path, a level or downward path being dangerous in the extreme. The genius of Paracelsus enabled him to describe these psychological phases, but he had to invent new words to do this, and to give his readers the results of his intuitive



experience, in which he believed fanatically. The conflict between Nature and human consciousness had become his one lasting and fundamental experience, but he had to explain his subject very carefully for fear of being misunderstood by a world quite unprepared for his ideas, which is the reason for his obscure style, his redundancy and his irritating habit of distrusting his reader.

Paracelsus has long been known as the precursor of the modern chemical theory of medicine, who broke with the older medicine which was oriented along lines that do not lead to the medicine of today. Yet he was not only a precursor of chemical medicine, but also, as Dr. Jung says in this book, of experimental psychology and psychological therapy. In order to explain the speculative theories of Paracelsus and their origins, Dr. Jung perhaps has unduly stressed that aspect of the philosophy of the great physician which appeals least to the modern mind, the intuitive and subjective conclusions that are incapable of experimental proof. Dr. Jung insists quite rightly that Paracelsus' theory of the new medicine was based strictly on experiment as opposed to the old text-books; but what is new in this book is Dr. Jung's attempt to show how Paracelsus' subjective conclusions, based on a subjective metaphysical—we might almost say 'occult'—system, were brought into complete accord with experimental results.

[G. H.]

#### OBITUARY NOTICE.

ALAN FRANCIS TITLEY, 1897–1946

The untimely death of Alan Titley, at the early age of 48, has taken from us an unusual personality, and a man who did not allow physical disability to dull an active mind or a happy talent for friendship. He was born in Bristol, and after his schooldays at Clifton, took his first degree in chemistry at Bristol University. Following upon student research with Frances and McBain he was awarded a Ramsay Fellowship and worked for several years at Oxford with W. H. Perkin, Jun., first upon the chemistry of *epicamphor* and afterwards upon studies in ring formation. He was one of the earliest recipients of the Oxford D.Phil. degree.

During these years he had read widely, not only in his chosen scientific field but in literature at large, and had acquired a knowledge of music and a deep feeling for it which remained one of his greatest pleasures. His unusual range of interests led him to an appointment as lecturer in the Department of Education at Liverpool University, and in 1931 to a similar post at King's College, London, which he held until his death in May of this year.

He was elected a member of the Society for the Study of Alchemy and Early Chemistry in July 1937 and was a member of the Council from October of that year until his death. He contributed two interesting papers to *Ambix* (Vol. I, 67, 166). He was also a member of the Publication Committee from 1938 until 1946. His death is a real loss to the Society.

After 1939 he was for a time engaged upon wartime research problems and afterwards held a temporary appointment with the Ministry of Supply. His many wartime activities overtaxed his health and were undoubtedly responsible for his final illness.

S. BARRATT.